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ABSTRACT

The proceedings of a workshop on the growth of Southeast Asian universities emphasize the problems attendant to this growth; for example, expansion versus consolidation of higher education, and mass versus selective higher education. Papers concerned with university growth focus on various countries: Indonesia, Khmer Republic, Laos, Vietnam, Malasia, Singapore, Thailand, and the Philippines. (MJM)

THE GROWTH OF SOUTHEAST ASIAN UNIVERSITIES
Expansion versus Consolidation

Proceedings of the Workshop
Held in Chiang Mai, Thailand
29 November – 2 December 1973

Edited
by
Amnuay Tapingkae

Regional Institute of Higher Education and Development
Singapore
April 1974

c/o University of Singapore
Bukit Timah Road
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PREFACE

In view of the rapid expansion of institutions of higher education in all countries of the Southeast Asian region, the Regional Institute of Higher Education and Development considered that it was appropriate to hold a regional workshop in order to take stock of the causes and consequences of higher education expansion in the region as well as to consider consolidation as an alternative. The purpose of this workshop on "The Growth of Southeast Asian Universities: Expansion versus Consolidation" was to bring administrators and educators as well as government officials together to discuss the problems of rapid expansion of institutions of higher education, to discuss the selective higher education approach and the mass higher education approach in the Southeast Asian economic and social contexts, and to explore a concept of "consolidation" as an alternative in higher education development in Southeast Asia today.

Participants from eight Southeast Asian countries, namely, Indonesia, the Khmer Republic, Laos, Malaysia, Singapore, Thailand, Vietnam and the Philippines, as well as representatives of ASAIHL, the Ford Foundation, the Higher Education Advisory Council of Malaysia, IAU, IDRC, IIE, SEAMES, the National Education Commission and University Development Commission of Thailand were present in Chiang Mai, Thailand for these deliberations.

In this report of the proceedings of the workshop, the discussion of each session has not been included as in previous reports of RIHED workshop proceedings. However, Part V of this report constitutes a summary of all the sessions.

April 1974

Amnuay Tapingkae

WELCOMING ADDRESS BY DR. AMNUAY TAPINGKAE DIRECTOR, RIHED

On behalf of the Regional Institute of Higher Education and Development, may I extend my warmest welcome and appreciation to you for your presence at the opening ceremony of the Regional Workshop on "The Growth of Southeast Asian Universities: Expansion versus Consolidation." This Institute, which is an intergovernmental organization in the Southeast Asian region, is charged with duties to stimulate and facilitate cooperation among universities and governments of the countries in Southeast Asia, and to enhance the contribution of higher education to the social and economic development of the countries in the region and of the region as a whole. To achieve such objectives, RIHED, among many other activities and programmes, sponsors workshops and seminars, both on the national and the regional levels. In bringing together administrators and scholars involved in the planning and operation of institutions of higher education and those in government agencies responsible for decisions affecting higher education development, it is hoped that serious and meaningful discussion on problems of development will take place. Furthermore, it is expected that insights into difficult problems may be gained and certain solutions found.

In the past three years and a half of its existence, the Regional Institute of Higher Education and Development has sponsored regional workshops in Singapore and Malaysia, and has held national seminars in the Khmer Republic, Thailand, the Republic of Vietnam, and Malaysia. This workshop is the first regional workshop to be held in Thailand.

Taking the region as a whole the majority of institutions of higher education in Southeast Asia were founded after the Second World War. To a large extent, this phenomenon of rapid expansion of higher education was the result of political independence, of a need to meet high-level manpower for public offices and industries. This rapid development and expansion is also a result of rising expectations in this changing world and the need for more education to enhance human understanding and sensitivity in a more complex world. However, specific motivating factors and reasons responsible for a phenomenal growth of tertiary education in the region vary from country to country. To illustrate the phenomenon of rapid expansion and growth, some examples are in order. Indonesia had only one university in 1949. Within the span of twenty years, the country has established no less than 322 colleges

and universities. The Philippines has seen even more dramatic expansion from a dozen or so institutions before the war, the number multiplied to over 400 in 1972. In the mainland countries of Southeast Asia, however, the growth in number of higher learning institutions has not been as rapid, though the growth in student enrolments has been equally high.

Such unprecedented growth of the Southeast Asian universities, co commitant with the increasing demand for education at all levels, has inevitably created many problems. This is true especially when the economy is still largely undeveloped and the available resources are strained by inflation, defence needs and the need to feed a rapidly growing population. Amidst these problems is a truism that a university education is always more expensive than primary and secondary education. Higher education involves a tremendous amount of funds and resources. The cost of producing a college or university graduate is very high. Yet, the irresistible demand for tertiary education has often succeeded in pressuring the national governments as well as the private circles into creating more colleges and universities, oftentimes without regard to specific manpower needs of the country, or without taking into consideration the capability of the economy of the country to absorb university graduates in productive employment. The problem is further accentuated by the absence or lack of coordination among the universities and between the universities and governments. Thus, increased enrolments have not necessarily been in disciplines most needed for national development. The result, therefore, is graduate unemployment or underemployment. Consequently, there are constant complaints that development needs for trained manpower are not being met, that graduates in certain fields of training are unemployed or underemployed, and that the mounting cost of university education is showing a decreasing return to society in terms of overall national well-being and development.

The above situation leads us to a number of important questions: whether higher education in Southeast Asia is being expanded and developed in the proper direction; whether its current growth is healthy and justifiable; whether the existing structure and systems are the most appropriate for the new day and age, and, whether planning and coordination are adequate and appropriate.

It is with such questions in mind that the Regional Institute of Higher Education and Development would like to invite the attention of those responsible for university education in Southeast Asia to look into the problems of expansion and consolidation of our universities. This regional workshop is utilized as a venue to critically assess and evaluate such growth of Southeast Asian institutions of higher education. During the four days of the workshop, participants will be exploring three areas of concern within the theme "The Growth of Southeast Asian Universities: Expansion versus Consolidation."

The workshop will begin this afternoon in which participants will examine problems of university growth in Southeast Asia with pertinent questions such as: Are the universities in Southeast Asia growing too rapidly? To what extent has such growth impaired the quality of higher education? What resources are available to meet the rising cost of university education? Are the Southeast Asian universities capable of producing manpower needs for national and regional development? How are governments in the region coping with the increasing social demands for tertiary education? To what extent has the unplanned growth of universities created unemployment or underemployment among university graduates? What are the social and economic implications of such unemployment and underemployment? Out of these questions, it is hoped that new ideas might emerge which may contribute to a healthier growth of university education in Southeast Asia. The workshop will be able to look at the problems from the perspective of the whole region when papers dealing with these questions from each member country are presented.

The second area of concern will be on problems of expansion versus consolidation of higher education in Southeast Asia. Owing to the exceptionally rapid expansion of university education in Indonesia, a special session will be devoted to the examination of problems of university growth in that country. Indonesia has already embarked upon a programme of university consolidation, by establishing Centres of Excellence, combining several colleges and universities to strengthen the quality and programme. A comprehensive report from Indonesia on this problem will be presented and discussed.

The third and last area of concern will be on two opposing ideas on higher education, that is, mass versus selective higher education. Papers written by a delegate from Thailand and a delegate from Singapore will be examined and discussed. Thailand, in its decision to establish an open university and to permit private colleges to be created seems to have adopted a tendency towards mass higher education. On the other hand, Singapore has been operating on the concept of selective higher education with attention to manpower needs of the country and the ability of the economy to absorb university graduates into productive employment. It is hoped that during this session the two approaches will be critically examined in relation to national development policies as well as to social and economic realities in the region.

These three areas or concern will be dealt with in five discussion sessions. The workshop will devote its final session to the preparation of recommendations which might be useful to universities and governments of countries in Southeast Asia with regard to university growth and development.

The Regional Institute of Higher Education and Development is grateful to

Chiang Mai University for hosting this regional workshop. As a host institution, Chiang Mai University has been extremely generous in making available to RIHED its physical facilities as well as the services of the staff and faculty. On behalf of the Institute, I wish to thank the Rector of Chiang Mai University, Prof. Dr. Tawan Kangwanpong for his cooperation and interest in this workshop. Such successful partnership reflects RIHED's objectives and wishes, that is, to facilitate closer and more meaningful cooperation. RIHED is pleased to act as a catalyst for such a venture.

The Regional Institute of Higher Education and Development, Chiang Mai University and all participants of this workshop are honoured by the presence of His Excellency, the Minister-in-Charge of State University Bureau, Prof. Aroon Sorathesn, at this official opening of the workshop today. I feel highly honoured to call upon His Excellency, the Minister-in-Charge of State University Bureau, now to deliver his opening address for this regional workshop.

OPENING ADDRESS BY HIS EXCELLENCY PROFESSOR AROON SORATHESN MINISTER-IN-CHARGE OF STATE UNIVERSITY BUREAU OF THAILAND

It is indeed a pleasure for me to be asked to address this gathering of distinguished scholars, university administrators, government officials from Southeast Asian countries as well as representatives of several international organizations. On behalf of the Thai Government, may I extend our warmest welcome to all of you. I hope that your stay in Thailand will be enjoyable and that your deliberations will be meaningful and fruitful. I wish to thank the Regional Institute of Higher Education and Development for having selected Thailand for holding this regional workshop as well as for the meetings of the Executive Committee and the Governing Board. It is gratifying to see the collaboration between RIHED and Chiang Mai University, which reflects the cooperative spirit of the region of Southeast Asia.

The decision of the seven countries of Southeast Asia to establish this regional Institute for the promotion of closer relationships among governments and the university communities in the region witnesses the birth of a new regional awareness. Higher education resources must be mobilized for national and regional development efforts. Governments and university communities in Southeast Asia must learn from each other, must cooperate with each other, and must think together so that higher education institutions in each country may be strengthened in order that their objectives and responsibilities will be fulfilled. Countries in our region are faced with many difficult tasks in forging ahead towards development in all spheres. To this end, every single resource must be positively utilized in the effort of building a better tomorrow. The universities, with a wealth of talents and potentialities, must be well-equipped physically and intellectually. At the same time, the universities must be challenged to be responsible for and responsive to the needs of the nation. Thailand is proud to be part of this regional organization. This regional partnership will be strengthened through our support and close cooperation.

The selection of the topic for this regional workshop on the Growth of Southeast Asian Universities with a focus on the problems of expansion and consolidation could not be more timely for our region today. As has been pointed out by the Director of RIHED, the governments of countries of Southeast Asia in recent years have given high priority to higher education development. Demands for education beyond the secondary level have increased

significantly. In response to these demands, a large number of higher education institutions, both public and private, have been created.

In this day and age it is very easy and natural to assume an attitude that the more universities we create, the faster our countries will move ahead. This assumption is not always valid and should be critically examined. Quantities and numbers in higher education alone do not necessarily signify the best investment and best allocation of resources for national well-being. Governments in this region, at one time or another, must have been faced with many basic questions such as how to develop higher education so that it serves the best interest of the nation as a whole in terms of both present and future, how to make the universities relevant to national needs and aspirations, how to create employment opportunities for university graduates, or how to utilize university talents and potentialities for nation building. It is indeed gratifying to learn that these questions and many more will be discussed during the deliberations of this regional workshop. I certainly hope that answers and recommendations will be formulated and put forward for the benefits of the countries of Southeast Asia which face many common problems.

Again, on behalf of the Government of Thailand, I would like to thank the Regional Institute of Higher Education and Development for bringing together distinguished scholars, administrators and planners in order to examine problems of university development and to promote better understanding and cooperation among governments and universities of the Southeast Asian region. I hope that RIHED will continue to play this significant role in this regional awareness and closer cooperation.

May your deliberations be successful and fruitful.

Ladies and Gentlemen, now it is a great pleasure for me to declare this workshop open.

PART I

PROBLEMS OF UNIVERSITY GROWTH IN SOUTHEAST ASIA

PROBLEMS OF UNIVERSITY GROWTH IN INDONESIA

Achjani Atmakusuma

INTRODUCTION

During the Sriwijaya Empire in the late seventh century A.D. there was a Buddhist University near Palembang, Sumatra, which was a centre of learning. No records exist concerning the fate of this University nor of the existence of higher education in Indonesia over the following twelve centuries.

In 1910, during the Dutch colonial period, consideration was given to develop a programme of higher education in the classical western sense. This reflected the increasing need for professional manpower, which was difficult to recruit from Europe. Also, it would encourage the systematic establishment of Dutch culture among the university trained Indonesians This idea became a reality in 1920 with the establishment of the College of Engineering (THS) in Bandung, Jave.

A number of additional colleges were organized to provide professional personnel with skills in plantation agriculture and administration.

Between 1920 and 1941, the following institutions of higher education were brought into being:

1920	:	College of Engineering (THS) in Bandung.
1924	:	College of Law (RHS) in Jakarta.
1927	:	College of Medicine in Jakarta.
1940	:	College of Arts in Jakarta. School of Medicine and Dentistry in Surabaya.
1941	:	The first year class (propadeuse), initiated for agricultural higher education in Bogor, attached to the College of Medicine in Jakarta.

During the colonial period the college or faculty philosophy prevailed and the model of a unified university was not provided. When the university concept was introduced after independence, the faculty atmosphere could not be completely abolished. The faculties continued to form a community separated from other units comprising the university. Consequently, the modern day Indonesian universities continue as a more or less multiversity system or as an amalgamation of independent faculties. This imposes certain constraints

on the extension of interdisciplinary cooperation that is becoming increasingly desirable. Often it involves duplication of costly effort and equipment.

Most of the students admitted to study in the colleges between 1920 and 1941 were Dutch and Eurasians and only a small percentage of Indonesians were permitted (Table I).

Educational activities were stopped for six to eight months when the Dutch surrendered to the Japanese on 2 March, 1942. When teaching was resumed, the level of education remained almost the same. The medium of instruction changed from Dutch to Bahasa Indonesia and Dutch textbooks were translated, incidentally without the legal permission of the authors. All educational activities were handled by Indonesians over the next three years and a half with the result that Indonesians gained self-assurance. Also, they were able to obtain a national indigeneous education.

After the proclamation of independence (17 August, 1945) higher education in Indonesia escalated greatly compared to the Dutch period. Progress made was remarkable in a quantitative and qualitative sense. Even though conditions were extremely unstable from 1945-50, new features and new institutional structures evolved. Institutions for higher education were founded by private patriotic groups of nationalists and by religious components of the society.

In Jakarta, which remained under Dutch domination, Republic Patriots started a programme of higher studies called "Balai Perguruan Tinggi Republik Indonesia," which was a rival to the Dutch-controlled University of Indonesia. Consequently, few Indonesians were enrolled in this establishment.

The University of Indonesia, established by the Dutch in 1947, consisted of colleges in Jakarta, Bogor, Bandung, Makassar and Surabaya. A major aim was thought to attract Indonesian youth away from the war of independence and into the colleges.

Colleges were also organized by private groups and included:

12 February, 1946	:	College of Engineering in Yogyakarta.
3 March, 1946	:	Colleges of Law and Literature in Yogyakarta.
February 1946	:	Colleges of Medicine and Dentistry in Malang.
27 September, 1946	:	College of Agriculture in Klaten.
1947		College of Veterinary Medicine in Klaten.

TABLE I

STUDENT ENROLMENT AND GRADUATES IN INDONESIA DURING THE DUTCH COLONIAL PERIOD

Academic Year	Total Enrolment			High-School Graduates		
	Total Students	Indonesian Students		Total Graduates	Indonesian Graduates	
		Total	%		Total	%
1920/21	28	2	7.1	--	–	–
1921/22	37	6	16.2	–	–	–
1922/23	42	8	19.0	--	–	–
1923/24	18	5	27.8	12	–	–
1924/25	76	25	32.9	8	–	–
1925/26	60	21	35.0	20	4	20.0
1926/27	63	30	47.6	14	6	42.8
1927/28	88	38	43.2	8	3	37.5
1928/29	110	44	40.0	13	3	23.0
1929/30	162	91	56.2	19	6	32.6
1930/31	227	106	46.7	12	4	33.3
1931/32	212	93	43.8	17	8	47.0
1932/33	228	109	47.8	15	7	46.7
1933/34	266	121	47.2	22	8	36.4
1934/35	266	112	42.1	34	14	41.2
1935/36	231	103	44.6	58	29	50.0
1936/37	253	120	47.4	49	23	46.9
1937/38	287	155	54.0	71	38	53.5
1938/39	280	143	51.0	81	40	49.4
1939/40	318	157	49.3	79	37	46.8
Total	3,242	1,489	45.9	532	230	43.2

These colleges became Gajah Mada University on 19 December, 1949, the first university of the Republic of Indonesia.

Between 1950 and 1960, 7 state and 17 private universities were established (Table II).

In 1963, a decree was issued by the Republic of Indonesia to provide each of the 25 provinces the opportunity to establish provincial state universities. This resulted in a tremendous addition of faculties. By 1965, student enrolment reached 184,000 at 28 universities (Table II), and 10 institutions of teacher training and education located at:

Jakarta,	established	in	1964.
Bandung,	established	in	1964.
Yogyakarta,	established	in	1964.
Malang,	established	in	1964.
Surabaya,	established	in	1964.
Makassar,	established	in	1965.
Medan,	established	in	1965.
Semarang,	established	in	1965.
Manado,	established	in	1965.
Padang,	established	in	1965.

In total, there were now 179 private institutions of higher education and 92 government agencies involved.

This rapid establishment of new state universities in the period following the 1963 decree, was mainly made possible by conferring independent university status on groups of faculties previously affiliated with an older university and incorporating private faculties as state universities.

PROBLEMS

The growth of universities after independence in Indonesia was tremendous, especially in the period 1960-65. How many institutions of higher learning should there be to meet the demands of the Indonesian people? What are the main reasons for the rapid growth? How many technical institutions are needed in terms of population? How many institutions are needed in proportion to institution of higher education? All these are questions needing serious consideration.

The main cause for such growth was the desire of the Indonesians to attain a better education and a more democratic education. This was the goal

TABLE II

UNIVERSITIES/INSTITUTIONS ESTABLISHED AFTER 1950

No.	Universities/Institutions	Year of Establishment	Location
1.	University of Indonesia	1950	Jakarta
2.	Airlangga University	1954	Surabaya
3.	Hasanuddin University	1956	Makassar
4.	Andalas University	1956	Padang
5.	Pajajaran University	1957	Bandung
6.	University of North Sumatra	1957	Medan
7.	Institute of Technology Bandung	1959	Bandung
8.	Lambung Mangkurat University	1960	Banjarmasin
9.	Sriwijaya University	1960	Palembang
10.	Institute of Technology Surabaya	1960	Surabaya
11.	Diponegoro University	1961	Semarang
12.	Syiah Kuala University	1961	Banda Aceh
13.	Sam Ratulangi University	1961	Manado
14.	Pattimura University	1962	Ambon
15.	Udayana University	1962	Denpasar
16.	Nusacendana University	1962	Kupang
17.	Mulawarman University	1962	Samarinda
18.	Mataram University	1962	Mataram
19.	University of Riau	1962	Pakanbaru
20.	Cenderawasih University	1962	Irian Jaya
21.	Brawijaya University	1963	Malang
22.	University of Jambi	1963	Jambi
23.	University of Pontianak	1963	Pontianak
24.	Jenderal Sudirman University	1963	Purwokerto
25.	Bogor Agricultural University	1963	Bogor
26.	University of Palangkaraya	1963	Palangkaraya
27.	University of Jember	1964	Jember
28.	University of Lampung	1965	Lampung

after the independence. This growth also was enhanced due to the quantitative approach in higher education and to the socio-cultural, ideological, political and economical factors, which caused an uncontrolled and unplanned growth.

The situation became even worse when political parties infiltrated the campus, resulting often in different attitudes between members of the university community that were frequently manifested in public dispute.

Educators oftentimes were in disagreement with the pattern of approach as well as with the solution taken by the political parties in power. Problems of education became more complex and could not be solved separately.

After the establishment of universities in the provinces, initial financial support was offered by the provincial government in the first two to three years and seemed to augment a favourable growth of the faculties. However, in most of the provinces, this contribution did not last long enough to enable the faculties to develop adequately and properly, and resulted in the establishment of poorly equipped institutions.

In some institutions there were teaching staff members who met requirements, qualitatively. They did not have enough facilities to develop their skills or to do research work, even though they knew that scientific research was vital to create a real academic environment, and to help to solve the problems raised by the expansion and improvement of agriculture and by the industrial development. On the other hand, the proliferation of the faculties throughout Indonesia, caused by the establishment of many regional universities, further aggravated the shortage of staff, laboratories, libraries and even local equipment which lowered the educational standard.

To meet the need of teaching staff, new staff members were recruited without any selection or a well-defined personnel development. The teaching staff composition in the academic field often does not meet the real need of the field concerned, which should be the case in a well-arranged academic situation. Some fields are overstaffed while others have a minimal number of staff.

The shortage of staff members is reflected in the student/staff ratio, which is below the minimal requirement. In Indonesia, the annual increase of student enrolment can be expected to range from 20,000 to 60,000 students, distributed among state and private universities. This increase cannot be avoided, since high-school graduates are superfluously poured out into the area of higher learning. Since during the colonial era only few Indonesians

were pe[illegible]d to attend institutions of higher learning, every high-school graduate [illegible]d to pursue a university training after independence.

The increase in enrolments has not always been in disciplines most needed for national development. Often there is an absence or lack of coordination among the universities and between the universities and the governments. The result is a high rate of student dropout and a saturation of employment at the level of university graduates for some sectors of the economic field.

In addition to the state universities, there are also private institutions of higher education whose establishment and operation are permitted provided they meet the fulfillment of basic conditions intended to safeguard minimum educational standards. These institutions are large in number and play an important role in meeting the expanding demand for admission to higher education in Indonesia. They fall into distinct types according to the nature of their administrative structure, their relations with the Government, and in terms of the kind and scope of their academic provision and training facilities.

The types of the private institutions are "equalized," "recognized" and "registered" institutions. Examinations and awards granted by "equalized" institutions are recognized by the Government. The category of "recognized" means that this institution may conduct examinations under government supervision, while students of "registered" institutions must undertake state examinations. Private institutions account for over 60 per cent of the total enrolment in higher education. It is clear that much of the consumer demand for the expansion of higher education facilities can, at least in certain situations, be met through private institutions.

Other serious difficulties in respect to standards as well as planning need to be resolved. Besides the state and private universities, other state colleges or academic activities exist under the auspicies of several departments, such as the Department of Interior, the Department of Public Works, etc. These academic activities originally were concerned in giving a type of higher vocational training to supply the necessary middle-level manpower for the respective departments or ministries. In the 1960s they were upgraded into faculties, based on the Higher Education Act No. 22, 1962. The result is that several ministries in Indonesia operate their own faculties and grant degrees to their graduates who may have doubtful qualification and inadequately planned training.

CONCLUSION

This worsening situation in higher education has been noted by the Ministry of Education and Culture. Measures to prevent its catastrophic consequences have been taken by the Government and the people who are seriously aware of the possibilities that could be achieved through education. Any hopes and expectations are based upon education from which all vital, significant, sufficiently complicated and even absolute roles have been outlined.

Education must definitely complement the strategy of development as a whole, be directed towards the modification of obsolete values, and pave the way in creating new and more suitable values to give its maximum outcome in any systematic efforts.

On the other hand, the Government has also realized that there is a distance between ideals and facts. The distance is great enough if observed from the points between objectives to be attained and the facts being confronted.

Measures that have been and will be taken by the Government will be presented in the second Indonesia paper by the Director of Higher Education.

SOME PROBLEMS OF KHMER UNIVERSITIES

Khus Chiev

HISTORICAL BACKGROUND

The totality of universities now in operation in the Khmer Republic is having a rather short history. Before 1965 there were only two universities:

the Buddhist University founded in 1954,
and
the University of Phnom Penh (UPP) founded in 1960.

The year 1965 was a historical landmark in the history of university education inside the country. Six universities were created stretching the list to include a total of eight universities founded within a time span of eleven years:

University of Technology (UT)
University of Fine Arts (UBA)
University of Kampong Cham (UKC)
University of Takeo-Kampot (UTK)
University of Agronomy (USCA)
Popular University (UPO)

In 1967 another university came into being, the University of Battambang (UB), which is perhaps the last university to be established within the decade following 1965.

SOCIO-ECONOMIC REASONS

Soon after independence Khmer technicians and politicians all agreed that there should be four poles of industrial developments in the Khmer Republic:

Zone I : Grouping the central and southern provinces.
Zone II : Grouping the northern and northwestern provinces.
Zone III : Grouping the eastern and northeastern provinces.
Zone IV : Grouping the southwestern provinces.

Once these poles of development were delimited, steps were taken to ensure positive transformations within each zone. Public facilities had to be created which became the race of the decade following 1960. The peasants

were drawn away from their homes to build small dams, roads, and schools for the community and money was drawn from their savings to meet the incidental expenses. With the same sacrifices the provincial universities were built. The population of the region paid for the construction of the buildings and friendly foreign nations provided laboratory equipment together with vital teaching personnel.

Table I shows the geographical distribution of the Khmer universities.

CHARACTERISTICS OF KHMER UNIVERSITIES

All Khmer universities, with the exception of the University of Agronomy and the Popular University, have one special feature in common: secondary level and tertiary level education coexist side by side. This secondary level education, however, aims at preparing the students more for a technico-professional career in the industrial community than for their future access to higher education.

The University of Agronomy undertakes only tertiary level training whereas the Popular University specializes exclusively in a variety of secondary level technical and vocational training.

Table II shows the percentage of secondary level students within each university.

All Khmer universities with the exception of the University of Agronomy and the Buddhist University are responsible to the Ministry of Education. The coordination between them falls under the responsibilities of the High Council of the Universities.

The University of Agronomy is responsible to the Ministry of Agriculture and the Buddhist University is responsible to the Ministry of Culture. Both universities have their representatives in the High Council of the Universities.

It is perhaps worthwhile pointing out that unnecessary duplications have been avoided: no two Khmer universities are undertaking the same kinds of training.

The Buddhist University gives training in Religious Studies and Letters.

The University of Phnom Penh through its ten Faculties gives training in Law, Economics, Commerce, Letters, Sciences, Medicine, Dentistry, Pharmacy and Education.

TABLE I

GEOGRAPHICAL DISTRIBUTION OF THE UNIVERSITIES

Zone	Population	University
I	1,914,866	University of Phnom Penh (UPP) University of Technology (UT) University of Fine Arts (UBA) University of Agronomy (USCA) Popular University (UPO)
II	1,070,200	Buddhist University (UB)
III	1,329,598	University of Kampong Cham (UKC)
IV	862,161	University of Takeo-Kampot (UTK)

TABLE II

PERCENTAGE OF SECOND DEGREE STUDENTS IN EACH UNIVERSITY

Universities	1964–65	1965–66	1966–67	1967–68	1968–69	1969–70	1970–71	1971–72
University of Technology	92.13	95.50	79.18	70.37	59.68	58.52	56.50	56.72
University of Kampong Cham	–	31.30	44.54	44.39	44.36	42.18	78.18	83.33
University of Takeo-Kampot	–	–	–	100	83.31	77.17	–	–
Buddhist University	–	–	100	100	100	100	100	100
Popular University	–	100	100	100	100	100	100	100
University of Fine Arts	100	88.77	83.39	80.87	79.86	74.66	80.90	78.88
University of Phnom Penh	30.84	27.01	25.69	25.52	27.52	17.57	21.74	19.20
University of Agronomy	–	–	–	–	–	–	–	–

The University of Technology gives training in Engineering.

The University of Kampong Cham had three Faculties: Mechanical Engineering, Tropical Agriculture and Physico-Mathematical Sciences. But since 1972 it has been undertaking only secondary level technical training.

The overall enrolment of the universities has been steadily increasing. Table III shows the yearly enrolment of the various institutions.

The number of students per 100,000 inhabitants is still very low even by Southeast Asian standards. In 1970 this number amounted only to 119.

COST OF HIGHER EDUCATION

All Khmer universities are state-supported institutions. Only very nominal fees are levied on the individual students. This practice has cost the Government a yearly expenditure of approximately three per cent of the National Budget.

EFFECTS OF THE WAR

Soon after the outbreak of the war all the provincial universities have ceased to operate as institutions of higher learning. The University of Takeo-Kampot has been abandoned for security measures, whereas both the University of Kampong Cham and the University of Battambang have given only secondary level technical training.

The outbreak of the war has had a strong impact on the development of higher education in the Khmer Republic.

There was an exodus of foreign professors and lecturers leaving behind a vacuum in certain faculties. The High Council of the Universities suggested an immediate integration of the different faculties to ease the problems created by the acute shortage of teaching staff and the rising cost of operation. As a result the University of Technology has regrouped on the same campus, all of its faculties previously scattered on all corners of the city of Phnom Penh, to insure rational utilization of laboratory equipment and teaching personnel.

TABLE III

THE YEARLY ENROLMENT OF THE UNIVERSITIES (TERTIARY LEVEL STUDENTS)

Universities	1964–65	1965–66	1966–67	1967–68	1968–69	1969–70	1970–71	1971–72
University of Phnom Penh	1,973	2,623	2,568	3,279	3,750	4,039	5,505	7,017
University of Technology	116	199	341	500	617	577	452	293
University of Fine Arts	–	53	85	127	144	169	148	155
University of Kampong Cham	–	127	183	253	316	344	41	21
University of Takeo-Kampot	–	–	–	–	27	42	–	–
University of Agronomy	–	–	36	66	124	139	117	112
Buddhist University	21	32	44	48	40	47	34	54
Total	2,110	3,034	3,257	4,273	5,018	5,357	6,297	7,652

HIGHER EDUCATION DEVELOPMENT IN LAOS

Tenh Teso

HISTORICAL BACKGROUND

With regard to education (in Laos), due to "difficulties inherent in the structure of the country and the ethnic makeup of its population, efforts made by the local administration were often thwarted," were the statements that one can read in the ***Report to the High Council of Financial and Economic Affairs in 1937,*** compiled after 40 years under colonial rule. This reflects the fact that during the colonial era, educational development (in Laos) was hampered by various factors.

Colonization was first of all a French commercial venture. However, Laos offered few products for profitable export. Therefore, Laos was relegated the status of a colonial holiday resort.

Secondly, the famous motto "pas d'elites pas d'ennui" (no elites, no troubles) was practised with ethusiasm by the colonial administration: selection and education of the upper classes of the society whose styles, opinions and ways of thinking were modelled upon the French.

The results were obvious. In 1937, there was only one secondary school, namely, the ***College Pavie*** of Vientiane which boasted of a student population of 110, but only 44 out of these 110 students were Laotians. For advanced studies, a very scant number of privileged Laotians had to go to either Hanoi or Paris. Even at the time of Laos' independence, when the number of students in secondary schools had quintupled, no local institutions of higher learning were brought into existence.

CREATION OF SISAVANGVONG UNIVERSITY IN 1958

After independence in July 1949, the government policy of the democratization in education, the increasing aspiration of the population for university education and the ever-growing number of students in primary and secondary education put pressure on the Ministry of National Education into giving more attention to higher education.

Consequently, although secondary school leavers often supported by government scholarships continued to go to France for higher education, the legal basis for a university, later to be named Sisavangvong University, was

laid down by Royal Ordinance No. 164 of 30 June, 1958.

"The National Centre for Legal, Administrative and Political Education" or the former "School of Mandarins" under colonial times, was converted by Royal Ordinance No. 211 of 16 August, 1963 to the Royal Institute of Law and Administration (IRDA), thus becoming the first academic establishment of this University.

However, higher education, in the proper context of the term, is of recent development.

The reforms of the Royal Institute of Law and Administration in 1969 and 1971 which set forth the conditions for admission and extended the duration of studies from three to four years for the licentiate degree, help enhance IRDA's standing as an institution of higher learning.

The creation of the Doctorate of Medicine at the Royal School of Medicine (ERM) in 1969 further strengthened the status of Sisavangvong University.

The College of Pedagogy, which was recently reorganized in October 1973 into a normal school with high-school status and a school of pedagogy at the university level, is the most recently established institution of higher learning in Laos.

ADMINISTRATION

At the same time, Sisavangvong University was reorganized in October 1973 upon more modern and rational lines. University administration has since been put under the direct responsibility of a Rector instead of the Director of Higher Education as before. The Rector is assisted by a Secretary-General and a number of Heads of Divisions (see Annex I: Organization Chart). For reasons of economy, there is, however, no provision for a Vice Rector as is normally provided for in the case of universities in other countries.

At present, due to a shortage of qualified manpower, the rectorate is not yet fully staffed.

CHARACTERISTICS OF HIGHER EDUCATION IN LAOS

As has been pointed out earlier on, the first characteristic of higher education in Laos is its very infancy. Therefore, the Government still continues to send secondary school graduates overseas for advanced studies in certain fields, particularly in the sciences.

The Sisavangvong University cannot be compared to European "classical" universities which dispense general education at higher levels. Instead, it is oriented towards vocational and professional education and students admitted into the University must commit themselves to serve the civil service after graduation.

The third characteristic that deserves emphasis here is the diversity of its student population in terms of social and geographical origins.

In theory, the Sisavangvong University is open to all holders of secondary education diplomas who fail to obtain scholarships to go to France. In practice, however, they must pass an entrance examination to be admitted into one of the schools of their choice; otherwise they have to either pay their own way to overseas studies or wait until the next entrance examination is held (see Annex II).

PROBLEMS OF HIGHER EDUCATION

Rapid economic, political and social evolution in recent years in Laos has forced upon its system of higher education numerous new functions which have given rise to many problems.

One of these problems is the rapid increase in university enrolments as a result of the policy of democratization of education and its impact on other aspects of higher education: sites of schools, curriculum, teaching methods, university administration and the like. Solutions to these problems will have to be considered in a long-term perspective.

As higher education develops, it must be assigned a well-defined objective. In other words, the system of higher education must be made relevant to the changing needs of the nation. To this end, its curriculum must be improved.

In its reform in 1971, the Royal Institute of Law and Administration had partially resolved this problem by relating theoretical training to practice. To be useful and relevant to the realities of the country, higher education must indisputably link theory to practice. Thus, medical students, along with their theoretical studies, must practise at Mahosot Hospital, and IRDA students must go through a period of probation and are requested to write a short paper by the end of their third year of study at the Institute.

This approach cannot, however, be carried on in the best conditions possible in view of the paucity of human and material resources.

Another problem which is no less important is that French continues to be used as a medium of instruction in higher education in Laos. Of course, this tends to cut off the university from the society at large. It is now recognized by all educators that the most efficient way of teaching a subject matter is to use the student's mother tongue as a medium of instruction. Furthermore, the experiences in many countries prove that the complexity of modern sciences and technology can be expressed in languages other than European languages. Although there are always difficulties and obstacles to be overcome in the intervening period, long-term advantages of the use of the mother tongue as a medium of instruction will surely preponderate over its present inconvenience.

In addition, it is generally agreed that research is one of the main functions of higher education and must be given due attention by the university. However, the Sisavangvong University is not yet equipped with necessary personnel and material resources to undertake research in the years to come.

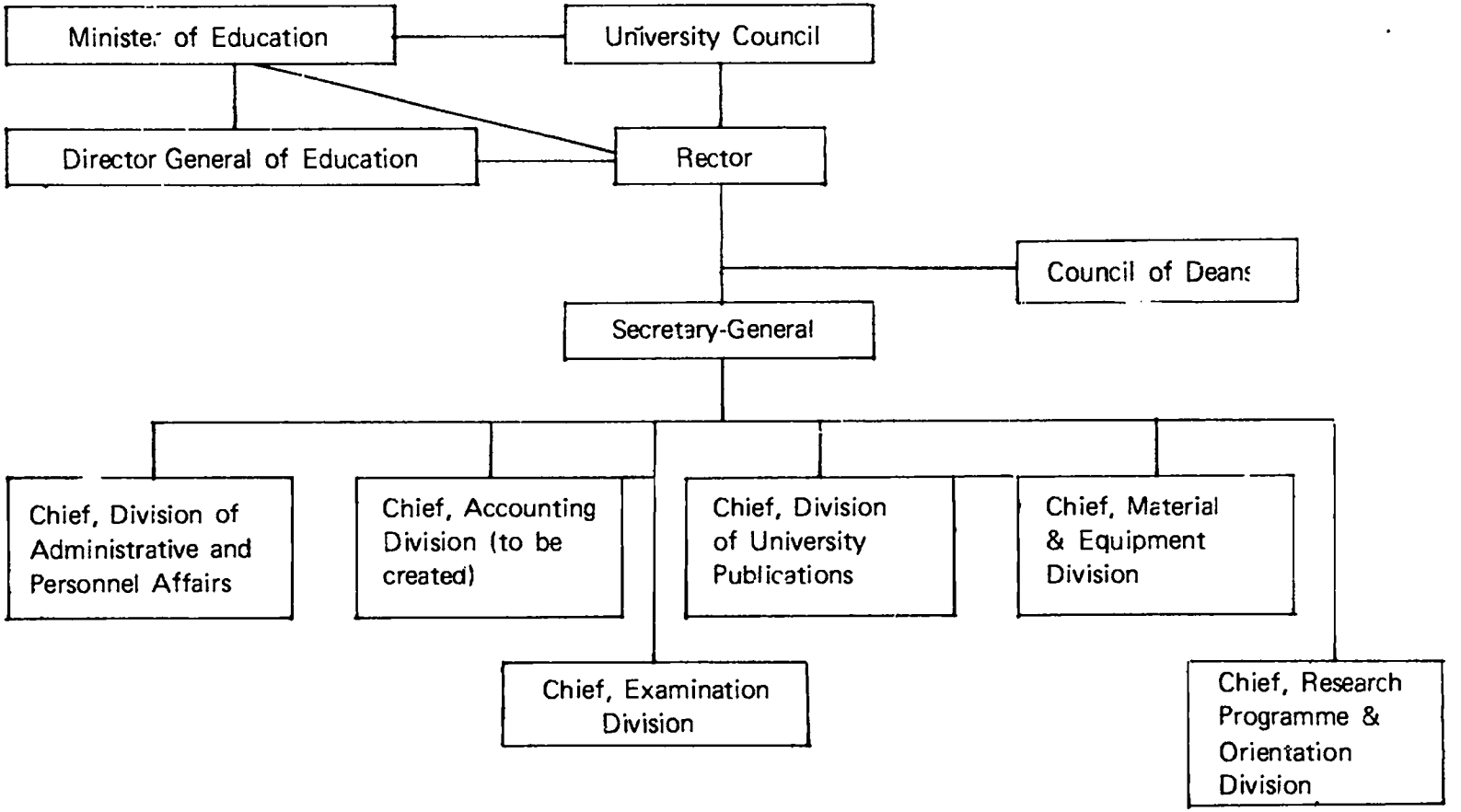
Finally, student activism is still another problem. One just cannot consider students as young people who must be instructed and ought to get an education for their own selfish ends. It is necessary to resolve problems caused by the increase in student population as social problems. In the current state of affairs, it is, however, difficult to find ways and means to meet their needs for action and to help them to adopt a right position with regard to various moral, social and political issues.

CONCLUSION

As has been known, in spite of its recent emergence, higher education in Laos is facing a great variety of difficult problems. The responsible authorities at the Ministry of Education will strive to resolve these problems the best they can, putting to proper use experiences of other countries in this field. We fully realize that development and improvement of higher education are essential for the promotion of intellectual life of the nation and for social progress.

ANNEX I

ORGANIZATION CHART OF THE RECTORATE OF SISAVANGVONG UNIVERSITY



ANNEX II
NUMBER OF STUDENTS AWARDED SCHOLARSHIPS FOR OVERSEA STUDIES BY COUNTRIES 1972-73

Countries	Number of Students
1. Australia	69
2. Canada	35
3. France	436
4. Germany	2
5. India	114
6. Japan	5
7. Khmer Republic	32
8. New Zealand	2
9. Poland	7
10. United Kingdom	2
11. U.S.S.R.	18
12. U.S.A.	43
13. Yugoslavia	3
14. Other countries	4
Total	772

NUMBER OF STUDENTS AWARDED SCHOLARSHIPS FOR STUDIES AT SISAVANGVONG UNIVERSITY

Schools	Number of Students
1. Royal Institute of Law and Administration	139
2. Royal School of Medicine	151
3. School of Pedagogy	99
Total	389

PROBLEMS OF UNIVERSITY GROWTH IN VIETNAM

Do Ba Khe

The purpose of this paper is to describe the Vietnamese higher education system, and to identify the problems connected with its growth and attempted efforts to solve them.

I. THE VIETNAMESE HIGHER EDUCATION SYSTEM

The Vietnamese higher education system as it now stands shows very little change from that known to the country in the early days of the Republic after the partition of the territory in 1954. It is the responsibility of the central authority for education. Budget allocations are to be approved by the Ministry of Culture, Education and Youth, and university personnel and civil servants. Curriculum addition and deletion must have the final approval of the Ministry. Even though higher education is recognized by the Legislature as having autonomy, no concensus has been reached on the connotations of this ambiguous word, and higher education is a direct responsibility of the Ministry of Culture, Education and Youth. The following organization chart shows this line of responsibility.

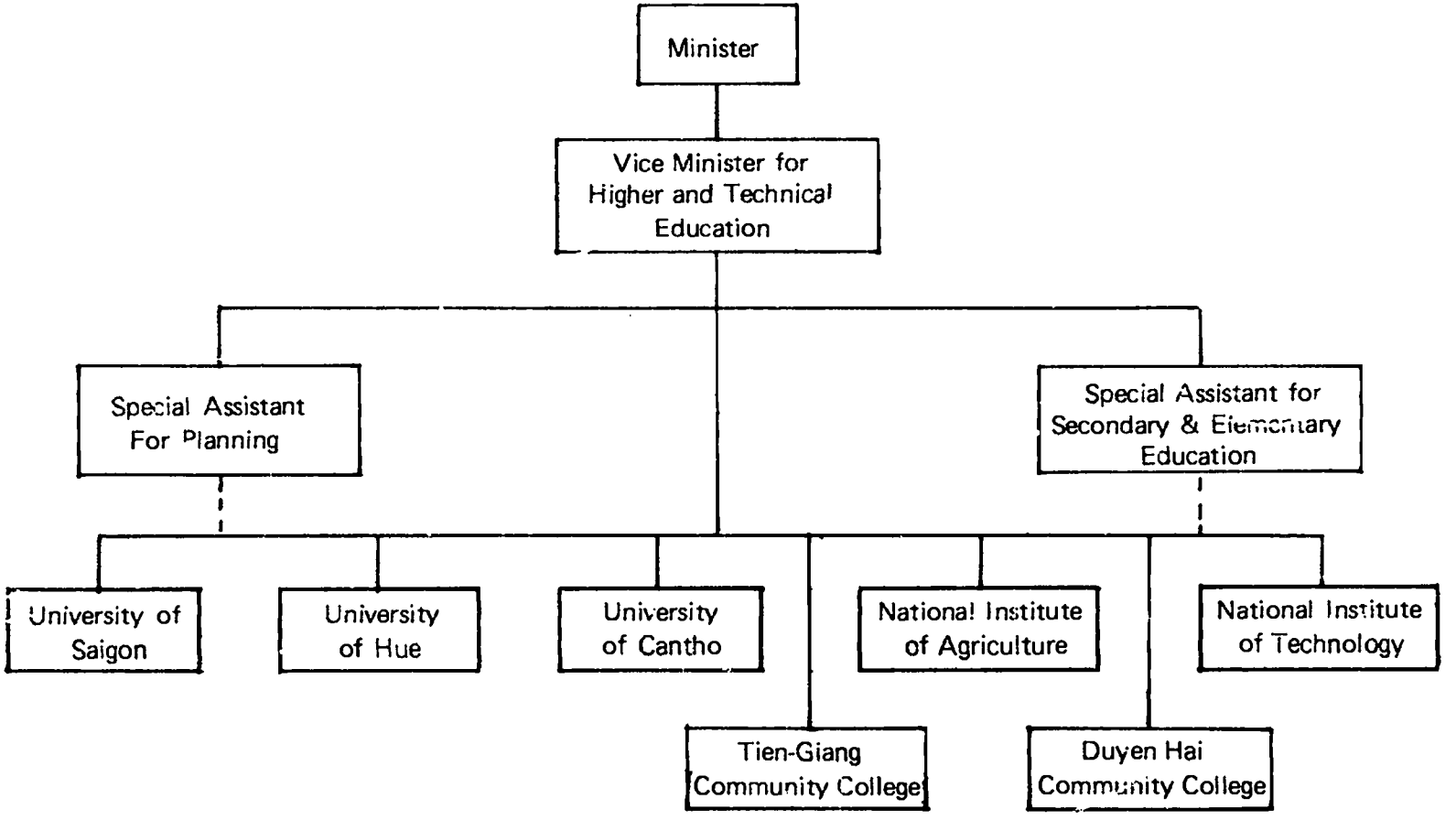
The chart also shows that there are three national universities, two national institutes and two community colleges. It does not show the private universities, which receive government subsidies and are ruled in a fashion by the Ministry of Culture, Education and Youth, namely: Dalat University (Catholic), Van Hanh University (Buddhist), Hoa Hao University (Hoa Hao Buddhist), Cao Dai University, Minh Duc University (Catholic), and Cuu Long College and Tri Hanh College. The last two are in a probationary stage of official recognition.

The National Institute of Public Administration, a public institution of university level, however, is an agency of the Civil Service.

Up to 1973, total enrolment amounted to 88,176 students, breaking down into 76,889 in public institutions and 11,287 in private institutions.

In terms of teaching staff, there are a total of 138 doctorate holders and 383 masters instructing in public universities, and 36 doctors and 56 masters instructing in national institutes.

ORGANIZATION CHART OF THE MINISTRY OF CULTURE, EDUCATION AND YOUTH



The teacher/student ratios at public universities are deplorably low, with one master teaching 125 students. Without distinction on the teaching staff's degrees, the ratios look better in the following Table I, broken down into fields of study.

Expenditure in 1973 of the Ministry of Culture, Education and Youth for higher education amounted to VN$4,269,045,000 including VN$118,000,000 in subsidies for private universities (US$1.00 = VN$535). Table II shows the percentage of higher education expenses in comparison with the Education Budget and the National Budget in the last five years.

II. DRAMATIC EXPANSION OF HIGHER EDUCATION

Part I shows the present situation of higher education in Vietnam, which represents a rapid growth over the past 17 years. In 1956, with the University of Saigon as the only institution of higher education throughout the country, the enrolment was less than 3,000. The increase has been steady over the years and is now 87,608 with 11 institutions of higher learning, not including 389 students in the two newly established community colleges. This rapid growth in the enrolment in Vietnamese universities is tabulated in Table III.

This increase in student enrolment, however, does not follow any planned pattern. Rather, it has been a result of lack of planning and the enrolment waves caused by growing numbers of high-school leavers every year.

Other causes are the traditional love for learning, the disdain for manual jobs, draft regulations' implications, open-enrolment policy, suitcasing professorship, and increasing numbers of high-school leavers.

In Vietnam, as in many other countries in Asia, there is a general ***love for learning*** among the common people. The more highly educated a person is, the greater respect the community pays him. Parents, therefore, whenever they can afford it, will send their children to institutions of higher learning to be labelled intellectuals. Learning in the Vietnamese tradition is closely connected with high public offices. A learned man was in most cases a mandarin, and the privileges of learning incorporated in the privileges of the mandarinate are, therefore, the dreams of parents, intelligent young men, and also young women in their prospective spouses.

Higher education also means a ***liberation from manual jobs.*** Like the scholar of the past with a long tunique, long fingernails, a university product of today, with spectacles, is sure to be exempted from hard work with his hands in his family from the time he enters university, and in society from the time he graduates.

TABLE I

TEACHER/STUDENT RATIO BY FIELDS OF STUDY

Fields of Study	Teacher/Student Ratio
Engineering	1/20
Agriculture	1/20
Medicine	1/10
Education	1/40
Science	1/50
Humanities and Social Sciences	1/400

(Source: Ministry of Culture, Education and Youth Statistics Office)

TABLE II

HIGHER EDUCATION BUDGET 1969-73 COMPARED WITH EDUCATION BUDGET AND NATIONAL BUDGET (IN VN$1,000)

BUDGET	FISCAL YEAR				
	1969	1970	1971	1972	1973
Total National Budget	145,534,224	197,062,000	272,069,818	324,231,619	435,132,987
Budget for Education	6,703,399	8,367,783	12,937,875	18,810,225	26,300,000
Budget for Higher Education	650,356	875,023	1,585,554	2,670,024	4,269,045
Education Budget / National Budget Per cent	4.6%	4.25%	4,75%	5.80%	6.04%
Higher Education Budget / Education Budget Per cent	9.7%	10.45%	12.25%	14.19%	16.23%
Higher Education Budget / National Budget Per cent	0.44%	0.44%	0.58%	0.82%	0.98%

TABLE III
UNIVERSITY ENROLMENT

Academic Year	University of Saigon	University of Hue	Cantho University	Van Hanh University	Dalat University	N.A.I.[a]	N.T.I.[b]	N.I.A.[c]	Minh Duc University	Hoa Hao University	Cao Dai University	Total
1957-58	4,315	670	–	–	–	–	–	–	–	–	–	4,985
1958-59	6,288	752	–	–	49	–	–	75	–	–	–	7,164
1959-60	8,400	1,141	–	–	187	54	–	96	–	–	–	9,878
1960-61	11,143	1,429	–	–	316	104	–	97	–	–	–	13,089
1961-62	12,616	2,267	–	–	426	158	–	101	–	–	–	15,568
1962-63	14,761	2,488	–	–	459	168	–	92	–	–	–	17,968
1963-64	17,054	3,272	–	–	444	188	–	100	–	–	–	21,058
1964-65	19,032	3,501	–	696	1,140	260	315	107	–	–	–	25,051
1965-66	22,619	3,099	–	488	1,342	298	338	98	–	–	–	28,282
1966-67	26,557	3,314	995	466	1,850	341	338	100	–	–	–	33,961
1967-68	26,730	3,385	1,375	1,598	2,452	308	367	100	–	–		36,315
1968-69	30,476	3,319	2,012	1,999	2,751	347	425	250	–	–	–	41,579
1969-70	34,580	3,352	3,006	2,217	3,353	390	528	100	–	–	–	47,526
1970-71	40,350	3,112	3,274	2,750	3,508	497	645	146	577	1,245	–	56,104
1971-72	50,380	4,266	3,557	2,799	3,898	590	741	146	1,077	1,800	351	69,535
1972-73	63,798	5,950	4,485	3,375	4,182	709	861	170	1,569	2,004	505	87,608

Source Ministry of Culture, Education and Youth Statistics Office

a -- Abbreviation for National Institute of Agriculture
b – –do– National Institute of Technology
c – –do– National Institute of Administration

Draft regulations of the country reinforce the retention of students in university. Especially after the 1968 Tet Offensive with the General Mobilization Law put into effect on the occasion, whereby all university students failing to pass their finals in two successive academic years are to join the Reserved Armed Forces, all male students try hard to get into a university, and once in, try harder to continue being there.

The ***open-enrolment policy*** is another factor causing the skyrocketing in student population. Each fall, high-school leavers will sit for entrance examinations to professional Faculties of Medicine, Dentistry, Pharmacy, Architecture and Pedagogy, and those who fail will crowd in the Faculties of Law, Letters and Science where an open-enrolment policy is adopted. Table IV indicates the overabundance of first year students in faculties with open-enrolment policy and the high attrition rate as a result of it.

Freshmen of open-enrolment faculties constitute more than half of the student population, while freshmen of selective admission faculties make up only one-fourth of their respective student population.

The fifth factor in the enrolment increase is the ***suitcasing practice*** of professors. As indicated earlier in this paper, the teacher/student ratio is very low in Vietnam. An end product of this and the open-enrolment policy is the need for some professors to move around the country to teach at different universities during the same academic year. All teachers, despite the fact that they are regular, permanent personnel of a certain university, can never be termed as full time workers for any university at all. This is coupled with another problem, namely, ***the absence of a legal base for higher education,*** or rather the archaic legal base, which will be elaborated in the subsequent portion of this paper, and which allows university professors a lot of freedom and not enough official obligations.

And above all the growth of university enrolments is and has always been caused by the ***expansion of secondary education.*** From a total of 764 high-school graduates in the summer of 1957, this figure soared up to 34,680 graduates in 1972, an increase of almost 500 per cent over a period of 15 years.

Table V shows the overwhelming increase in high-school graduates during this period, and this is achieved through the annual national secondary education examinations and not through "automatic" graduation as in the case of a number of countries.

TABLE IV

UNIVERSITY OF SAIGON ENROLMENT 1969-70
COMPARISON OF OPEN-ENROLMENT FACULTIES AND SELECTIVE ADMISSION FACULTIES

Faculties with Open-Enrolment Policy	First Year Students	Total Enrolment
Law	8,711	12,201
Letters	4,539	11,069
Science	3,412	5,900
Sub-total	16,662	29,170
Faculties with Selective Admission Policy		
Medicine	208	1,405
Dentistry	64	226
Pharmacy	303	2,112
Architecture	53	690
Pedagogy	587	939
Sub-total	1,215	5,372
Grand Total	17,877	34,542

Source: Charles B. Green, Some Current Observations General Information and Data on HiEd in Vietnam, USAID Education, June 15, 1973.

TABLE V

NUMBER OF HIGH-SCHOOL GRADUATES IN VIETNAM
1957-72

Year	Number Registered	Number Passing	Per cent Passing
1957	2,135	764	35.5
1958	2,052	1,037	50.5
1959	3,369	1,798	53.5
1960	8,321	2,213	26.6
1961	13,215	4,082	30.9
1962	16,263	4,545	27.9
1963	21,077	5,519	26.2
1964	30,475	5,574	18.3
1965	26,043	5,071	19.5
1966	28,763	12,659	44.0
1967	20,535	6,673	32.5
1968	29,913	11,600	38.8
1969	27,570	10,804	39.2
1970	21,733	13,485	62.0
1971	31,490	16,827	53.4
1972	52,328	34,680	66.3

Source: Ministry of Culture, Education and Youth Statistics Office

About four-fifths of 34,680 high-school graduates will enrol in some faculty of the eleven institutions of higher learning throughout the nation (practically all male high-school graduates move up to higher education just to get a draft deferment). In a sense, the universities have been established and/or expanded to meet the demands of the high-school leavers. It is therefore not a rhythmic growth under careful planning, but a forced growth in the wake of secondary education expansion. This has caused a host of problems generally recognized but not easy to overcome.

PROBLEMS OF UNIVERSITY GROWTH IN VIETNAM

1. Lack of Facilities

   It is impossible for an institution with an open-admission policy to provide adequate facilities for all entrants. It is not uncommon for students of Law, Letters and Science in Saigon to be at school at seven in the morning to occupy seats for a nine o'clock class, and those who simply come on time have no choice but to stand in the corridor by the windows to take notes of the professor's lecture given through noisy loudspeakers.

2. Lack of Trained Administrators

   Administrators have been selected from among the more popular professors, mostly experts in their academic fields but who have not had any previous training in university administration work. Deans, more often than not, have to bend their steps on a trial and error basis, with very little help from other Deans, the Rector or trained subordinates. University administration work has not been looked upon as being of sufficient importance to deserve any formal training. In the minds of some, it is not even known as a specialized field of study.

3. Lack of Teaching Personnel

   In Part I, we have presented the high student/teacher ratio because of the shortage of teaching personnel. This situation will continue to worsen if timely measures are not taken to remedy it. The whole national university system will soon be a part-time operation if teachers go on suitcasing and moonlighting. To meet the needs of entering students in this new academic year, we should have from 600 to 1,000 new faculty members to take care of around 30,000 new entrants each year.

   And to upgrade the quality of instruction, the first measure to be considered should be to diminish the class size down to a reasonable number. This means the supply of four times as many holders of master's degrees or from ten to fifteen times as many holders of doctor's degrees. (Present ratios of doctorate faculty/student being 1/496 and master faculty/student 1/125).

4. Lack of Financial Resources

Table II shows the low percentages of higher education appropriations in the National Budget, just a little more than one per cent. The unit cost per student is roughly VN$6,000 a year or equivalent to about US$11, including allocations for new constructions. Notwithstanding the low expenditures in higher education, the university cannot help charging exceptionally low tuition fees. Table VI highlights tuition rates in some of the major fields in selected universities. These go from free tuition for Pedagogy and Agriculture students at state universities to the highest tuition fees for medical students at Minh-Duc University (private), an equivalent of US$100 per annum.

5. Lack of a Legal Base

The Vietnamese universities are now operating under legislation passed on from the old colonial regime. The University of Saigon, for instance is still governed by the old statutes of the colonial University of Hanoi, of which it is an outgrowth.

Even though the Constitution states that higher education is to be autonomous, just what is meant by autonomy and how the autonomy is to be carried out are not spelled out. Additional legislation is needed to clarify this point and at the same time to supersede the obsolete statutes of the colonial University of Hanoi. Several bills have been submitted to the National Assembly — the latest, most representative of public will and expectations having been submitted to the Legislature on 28 March, 1973. Vietnamese higher education is awaiting this basic law in order to cast off the entrenchment of tradition and really get itself organized.

III. TRENDS IN HIGHER EDUCATION IN VIETNAM

Despite the multitude of problems, Vietnamese higher education is continually endeavouring to improve itself and is on the edge of total reform.

1. Selective Admission Policy

A new trend in university administration is the adoption of the selective admission policy, in the Faculty of Science, long recognized as a "liberal" college, in all private universities, and in community colleges. Teachers' growing concern for the quality of their products is taking effect, resulting in the decision to keep the class size to manageable, teachable numbers. In this way, the growth of universities will not be a primarily enrolment increase, but a planned total growth of physical facilities, teaching staff, and additional resources.

TABLE VI
UNIVERSITY TUTION FEE PER YEAR PER STUDENT
(IN PIASTERS: US$1=535 PIASTERS)

Fields	Saigon	Cantho	Hue	Minh Duc	Hoa Hao	Dalat	Van Hanh
Law	730	830	1,036	–	–	–	–
Letters	750	830	1,036	–	8,000	5,000	10,000
Science	1,055	890	1,036	40,500	–	7,000	–
Medicine	760	–	1,036	54,000	–	–	–
Pedagogy	Free	Free	Free	–	8,000	5,000	10,000
Pharmacy	635	–	–	–	–	–	–
Dentistry	760	–	–	–	–	–	–
Architecture	760	–	–	–	–	–	–
Social Science	–	830	–	–	–	–	–
Agriculture	–	Free	–	45,000	–	–	–
Philosophy	–	–	–	27,000	–	–	–
Government & Business Administration	–	–	–	–	–	5,000	–
International Relations & Management	–	–	–	–	8,000	–	–
Economics & Political Science	–	–	–	–	–	–	10,000
Commerce & Banking	–	–	–	–	8,000	–	–
Buddhist Studies	–	–	–	–	–	–	10,000
Language Centre	–	–	–	–	2,400	–	10,000
Economics/Business Administration	–	–	–	27,000	–	–	–

Note: Van Hanh University: VN$20,000 per year for 2-year curriculum
VN$10,000 per year for 4-year curriculum

Hoa Hao University : Every student is required to take English course regardless of his faculty
English course fee VN$1,200 per student per course (10 weeks)
Two course per year

2. The Community College Programme

A system of community colleges was established in Vietnam with a multipurpose: to relieve the enrolment pressures on universities, to train middle-level manpower for the nation's economic development, to provide a screening process with adequate guidance and counseling for aspirants of a university education, to implement community service programmes and to become a cultural centre for the community. Two public community colleges are now operating, gearing their curricula to answering the needs of their local parent communities, one in Agriculture and the other in Marine and Oceanographic Sciences. Others are being planned at a rate of one community college per year in the next five years.

3. Thu Duc Polytechnic University

After more than ten years of planning and campaigning, Thu Duc Polytechnic University was made a reality by a Presidential Decree on 29 March, 1973. It is located some 15 kilometers from the capital city, on the modern Saigon-Bien Hoa Highway, having on the one side the proximity to the lights of the capital and on the other the industrial complex that it will hopefully help to develop.

Thu Duc Polytechnic University is to concentrate on subjects of a practical nature, most vital to national development.

The administration of the new University is to be centralized, thus avoiding overlapping, duplication and wastage, and coordination is to be insured. It is charged with consolidating the three separate institutions: the National Technological Institute, the National Agricultural Institute, and the Higher Technical Education Centre.

The methods of teaching will aim at equipping students with problem solving skills. Discussion and inquiry are to be adopted, and inter-disciplinary teaching and learning are to be promoted. A core curriculum of general education will be centralized to implement this interdisciplinary concept.

Thu Duc Polytechnic University will be the first university in Vietnam to be able to plan its growth, to insure quality of instruction and to take national needs into academic considerations.

IV. CONCLUSION

We have briefly described the Vietnamese higher education system, the problems inherent in its unplanned growth and the new trends to improve it and eventually reform it.

We can say that the growth of higher education in Vietnam has moved from quantity to quality. With the implementation of new policies of selective admission, tuition increase, and other sporadic efforts to change from a yearly system to a semester system, and with the new legal base long-wai' 'or, Vietnamese higher education will embody the opposite direction of expansion: organize first, grow later.

It is clearly a hard decision to make because of political and social pressures. But if we visualize that universities must care for quality, then any authority which is in the least concerned with responsibility should overcome all obstacles in order to insure this quality. Otherwise, catastrophic consequences will come sooner or later, and devastating damage will be the end product.

PART II

PROBLEMS OF UNIVERSITY GROWTH IN SOUTHEAST ASIA (Continued)

'COUNTRY REPORT'
THE GROWTH OF UNIVERSITY EDUCATION IN MALAYSIA

Mohamed Suffian bin Hashim

INTRODUCTION

The Educational Revolution

The years after independence (1957) have been marked by successive phases in which the opportunity for education has been expanded, first at primary, then at secondary and finally at university level. First came the Education Act of 1961 which paved the way for free universal primary education. Ninety-five per cent of each age group enters primary education, and since the introduction of automatic promotion in 1965 approximately 80 per cent of primary schoolchildren enter the secondary level. Automatic promotion extends through nine years of education (from primary to lower secondary level) and approximately 50 per cent of each age group complete grade nine and enter upper secondary school. The introduction of the system of automatic promotion has thus raised the school leaving age to fifteen.

The improved opportunities for secondary schooling are largely responsible for the rapid growth in senior forms in recent years. Approximately 25 per cent of the schoolchildren enter Form IV and 5 per cent Form VI. Table I compares the enrolment by levels for the years 1957 and 1971.

These changes reinforced by the steady rise in national prosperity are now making their impact on the demand for higher education. The steady enrolment growth in university level education can be seen in Table II.

Facilities relating to higher education have been expanding rapidly in recent years. Annual recurrent expenditure has risen from $6.3 million in 1959 to over $80 million in 1972. Capital expenditure for the period 1970 – 1975 will be over $140 million. Over this period the total number of institutions with university status increased from one to five.

The five institutions and their years of establishment are shown in Table III.

This expansion, however, has not been accompanied by any lowering of standards but rather the reverse: this is because of the increase in the number

TABLE I

THE TOTAL NUMBER OF YOUNG PEOPLE OF VARIOUS AGES RECEIVING FULL-TIME EDUCATION IN MALAYSIA 1957 & 1971

Level	Age Group	Enrolment		Per cent Increase	Per cent of Age Group
		1957	1971		
Primary Education	6+ to 11+	933,151	1,457,698	156%	9[illegible].4
Lower Secondary Education	12+ to 14+	61,136	403,491	662%	56.7
Upper Secondary Education	15+ to 16+	18,727	97,060	525%	17.6
Post Secondary Education	17+ to 18+	4,063	20,182	502%	4.7
University Education	19+ to 24+	322*	8,219	255%	[illegible]

*Enrolment as of 1959

TABLE II

FULL-TIME STUDENTS IN UNIVERSITIES
1959 – 1972

Year	Enrolment	Year	Enrolment
1959	323	1966	3,603
1960	654	1967	4,560
1961	1,010	1968	5,566
1962	1,341	1969	6,672
1963	1,736	1970	8,119
1964	2,225	1971	9,845
1965	2,835	1972	10,968

TABLE III

UNIVERSITIES AND YEARS OF ESTABLISHMENT

No.	Universities	Year of Establishment
(i)	University of Malaya	1959
(ii)	University of Science Malaysia	1969
(iii)	The National University of Malaysia	1970
(iv)	The Agricultural University of Malaysia	1971
(v)	The National Institute of Technology	1972

of qualified entrants which allows universities to be more selective. For example, in 1973 out of a total of 14,124 candidates with minimum entrance qualifications only a third were given places in the universities.

HISTORICAL DEVELOPMENT

Historically the development of higher education in Malaysia can be considered in four stages: (i) Higher education in Malaysia and Singapore before 1957; (ii) The University of Malaya established in 1959; (iii) Universities founded as completely new institutions since 1969; and (iv) The former Technical and Agricultural Colleges which acquired university status in 1971 and 1972 respectively.

Stage (i) -- Higher Education in Malaysia before 1957

Higher education in the modern sense began with the establishment of the Straits Settlements and Federation Malay States Government Medical School in July 1905 at Singapore. The School offered courses in Medicine and Dentistry. In 1912 its name was changed to King Edward VII Medical School. In 1921 substantial academic expansion took place and the Medical School was renamed the King Edward VII College of Medicine.

The second institution was Raffles College also established in Singapore in 1928 to commemorate the centenary of Singapore. The School provided courses in English, History, Mathematics, Physics, Chemistry, Education, Economics and Geography.

These colleges developed side by side until 1949 when they were amalgamated to constitute the former University of Malaya at Singapore with three Faculties (Arts, Science and Medicine) and with full degree-granting status. The amalgamation followed the recommendation of the Carr-Saunders Commission on higher education. It was later agreed that by 1956 the University should open a branch in Kuala Lumpur.

Stage (ii) – The University of Malaya

In 1957, the year of independence, a Commission under the chairmanship of Sir Robert Aitken, Vice-Chancellor of the University of Birmingham, was appointed by the Governments of the Federation and of Singapore, to make recommendations in the light of the experience and rapid expansion of the last seven years, and to draw up a plan for the development of a university in Kuala Lumpur.

Following the Commission's Report and the recommendation of a Joint

Constitutional Committee appointed by the two Governments, legislation was passed in November 1958 providing for the continuance of the University of Malaya as a single university and the establishment of two autonomous divisions of equal status, one in each territory. The legislation came into effect, on 15 January, 1959. Under these arrangements the University of Malaya in Kuala Lumpur and the University of Malaya in Singapore each had a Principal, a Divisional Council and a Divisional Senate. The University of Malaya as a whole was administered by the Vice-Chancellor and the Central Council. Medicine and Law were taught in Singapore. Engineering was transferred to Kuala Lumpur. Arts and Science were taught in both divisions, but such subjects as Malay, Indian and Chinese Studies and Geology were available for the first time in Kuala Lumpur. Likewise, Philosophy, Social Studies and Chinese Language and Literature were available only in Singapore. The School of Education remained in Singapore.

In 1960 the Federation of Malaya desired that the Kuala Lumpur Division become the national University of Malaya. The Singapore Government also desired that the Division in Singapore become the national University of Singapore. Steps were taken in 1961 to achieve the establishment of these two separate national universities, and the necessary legislation was passed in October 1961 in the Parliament of the Federation and in December 1961 in the Legislative Assembly of the State of Singapore. The Kuala Lumpur Act came into effect on 1 January, 1962 thereby establishing the present University of Malaya in Kuala Lumpur.

The development of the University of Malaya in Kuala Lumpur has been rapid since 1959. Student numbers rose from 323 in 1959 to 1,010 in 1961 and continued to rise to 3,603 in 1966, 4,560 in 1967 and 8,544 in 1971.

The Arts Faculty Building, the Library, and the First Residential College were completed in 1969. The teaching of Arts, Engineering and Science began in 1959. A degree course in Agriculture was instituted in 1960. The Faculty of Medicine and the School of Education were established in 1963. This was followed by the establishment of the Faculty of Economics and Administration in 1964, the Language Centre in 1971 and the Faculties of Dentistry and of Law early in 1972. The University Hospital with 750 beds was completed and commissioned in 1967.

Table IV shows the enrolment growth in different faculties of the University.

For the University of Malaya the years beyond 1973 will be a period

TABLE IV
FULL-TIME STUDENTS BY FACULTIES
UNIVERSITY OF MALAYA 1959–1975

Faculties	1959	1960	1963	1966	1970	1971	1972	1973	1974	1975
Agriculture	–	27	99	185	324	383	417	300	220	120
Arts	163	354	908	1,836	3,265	3,578	3,443	3,270	3,.00	3,000
Dentistry	–	–	–	–	–	–	32	65	100	130
Engineering	129	159	257	311	392	500	598	650	720	740
Science	81	114	398	670	1,362	1,436	1,467	1,590	1,650	1,650
Law	–	–	--	–	–	–	51	100	150	200
Medicine	–	–	40	273	631	654	658	625	630	630
Education	–	–	34	191	443	524	603	600	600	600
Economics & Administration	–	–	–	133	1,360	1,470	1,479	1,600	1,530	1,530
Total	323	654	1,736	3,599	7,777	8,545	8,748	8,800	8,600	8,600

Note: Figures for years 1973–1975 are estimated

of consolidation. The enrolment will be kept at a maximum of 8,600 and any further development will be in the direction of postgraduate studies and advanced research. The Faculty of Agriculture at the University will be closed down after 1975 and its facilities transferred to the University of Agriculture. The University by 1975 hopes to establish a centre for postgraduate studies and research. The Centre would be developed around the three areas of Science, Engineering and Agriculture for the production of highly trained manpower for research, teaching and to fill the senior posts in industry. A modest beginning, however, has already been made in the field of post-graduate studies. Table V shows the student enrolment for the advanced level of studies in the various faculties in the University for the year 1972.

Under the Second Malaysia Plan (1971 – 1975) the University of Malaya will receive $11.25 million, which will be spent mainly on the establishment of the Graduate Study Centre, an Electron Microscope Centre and a sports complex and other student facilities.

Stage (iii) – Universities Founded as Completely New Institutions since 1969

On 26 September, 1962, the Government of the Federation of Malaya decided that a Higher Education Planning Committee should be established under the chairmanship of the Minister of Education, "to review the arrangements in the Federation of Malaya for higher education and to make recommendations for the development and improvement of such education in the light of the foreseeable future and financial resources of the country." The task of the Committee was a necessary extension of the work of the 1956 Education Committee, and the 1960 Education Review Committee which had not directed their attention to tertiary education.

Among other things the Committee in its Report which was published in 1967 recommended that:

1. The Technical College should convert into a College of Technology and enjoy a status comparable to that of a University, and courses leading to professional qualifications in Architecture, Surveying, Town and Country Planning as well as Engineering should be made available;
2. The Faculty of Agriculture should be expanded rapidly;
3. A University College should be established in Penang and be ready to admit students in 1970;
4. In addition to courses in the medium of English, more Arts and

TABLE V

ADVANCED STUDENTS – UNIVERSITY OF MALAYA – 1972

Faculties	Master's Degree	Doctorates
Arts	65	23
Economics	7	6
Education	46	14
Agriculture	40	4
Engineering	3	2
Science	81	17
Medicine	–	5
Total	242	71

Science courses, including courses in Technology in the medium of the National Language, should be further expanded at both university and college levels as soon as practicable; and

b. Facilities should also be made available for the training of high-level manpower in the following fields: (i) Accountancy, (ii) Library and Archival Science, (iii) Veterinary Science, (iv) Forestry, (v) Fisheries and (vi) Journalism.

(a) University of Science Malaysia

The first new university to be established was the University of Science Malaysia[1] at Penang, in 1969. The University offers courses in Natural Science, Social Sciences, Humanities, Education and Pharmaceutical Sciences, and will eventually offer courses in Applied Sciences, Building Science and Technology. In place of departments and faculties, the University offers courses through a number of broadly-based Schools of Studies. Within each School, the policy is to combine subjects and to organize courses in such a manner that a degree of traditional specialization in a chosen subject is possible, whilst at the same time the student is required to become acquainted with other related fields of study.

In the second year of its existence, the University established the School of Comparative Social Sciences and the School of Humanities. As the pattern of development in Malaysia today is expected to require and generate social change, the University is involved in yet another major role – that of providing undergraduate preparation for the training of specialist teachers of science in Malaysian secondary schools. Thus, a programme of study which sought to integrate Science with Education was developed with courses in Education being provided through the Centre for Educational Studies, established during the same time.

The thrust of the University into the fields of science and technology was further emphasized with the establishment of the School of Pharmaceutical Sciences in the third academic session 1971/72, and of the School of Applied Sciences and the School of Housing, Building and Planning in the academic session 1972/73. Table VI shows the enrolment in the various faculties for the years 1970 – 1975. Enrolments for the years 1973 – 1975 are estimated.

The University also organizes Off-Campus Academic Programmes to provide opportunities to adult students above the age of 23 years, who are in

[1] Originally named the University of Penang.

TABLE VI

STUDENT NUMBERS BY FACULTIES
UNIVERSITY OF SCIENCE MALAYSIA 1970 – 1975

Faculties	Enrolment					
	Actual			Estimated		
	1970	1971	1972	1973	1974	1975
Natural Science	19	23	17	90	90	90
Science	109	272	229	410	499	577
Science with Education	21	114	252	352	431	438
Pharmaceutical Sciences	–	–	20	46	–	–
Applied Sciences	–	–	–	32	273	480
Housing, Building & Planning	–	–	–	56	–	–
Social Sciences	79	211	333	371	379	470
Humanities	43	144	270	344	383	480
Science (Postgraduate)	1	2	6	30	45	90
Arts (Postgraduate)	1	2	6	25	40	60
Total	273	768	1,133	1,756	2,140	2,685
Off-Campus						
Social Sciences	–	32	107	157	207	227
Humanities	–	43	116	166	216	226
Science	–	–	–	50	100	150
Total	–	75	223	373	523	603

full-time employment or working in the home, to pursue university education leading to a degree. Established in June 1971, the programme is the first of its kind in Malaysia. It seeks to remove the inequality of opportunities that exists between working men on the one hand and full-time university undergraduate on the other. This programme will facilitate the acquirement of a university degree by many Malaysians who for some reason or other failed to acquire one or did not get the opportunity to do so.

During its first year of operation, courses from the Schools of Humanities and Comparative Social Sciences were offered with an initial enrolment of 89 students. Today, when this programme is in its third year of operation, the student population has increased rapidly to a total of 373 students. For the first time too, the School of Physics and Mathematics of the University has offered its courses in the programme, as of June 1973.

The University is now temporarily housed at the Malayan Teachers' Training College, and at the former British Army Barracks at Minden. A master site plan to develop Minden Barracks into a university campus is ready. Total cost of the project is expected to be in the region of $62.5 million. Work on the project is well under way and is expected to be completed by 1978.

The period beyond 1975 will be one of consolidation as well as expansion. The University is planning new courses in response to the needs of the country. The University plans to open the following schools:

1. The School of Nursing;
2. The School of Military Science;
3. The School of Insurance Studies; and
4. The School of Computational Science.

The University is also planning courses leading to awards in:

1. Diploma in Criminology;
2. Diploma in Fisheries; and
3. Diploma in Industrial Management.

(b) National University of Malaysia

Following the recommendation of the H.E.P.C. Report of 1967 the University Kebangsaan Malaysia was established in 1970 incorporating the Muslim College, the earliest institution of higher Islamic Education in Malaysia. The University aims at providing a liberal and balanced education. It has five

Faculties: Arts, Science, Islamic Studies. Medicine and Education. The medium of instruction is Bahasa Malaysia, but English is a compulsory second language. All students in the Faculties of Arts and Islamic Studies are required to take a course in General Science in the first and second years. Students in the Faculty of Science must take one unit of courses offered by the Faculty of Arts in the first and second years.

Students in the Faculty of Islamic Studies are also required to take two units of courses offered by the Faculty of Arts in the first year and three units in the second and third years.

The University is now temporarily housed at the Malayan Teachers' Training College in Kuala Lumpur. The University will eventually move to a new site at Bangi approximately twenty miles from Kuala Lumpur. The total cost of the project at Bangi, according to the Master Plan, is expected to be in the region of $121 million and the project will finally be completed in 1995.

The enrolment of the University during the last two years and the estimated enrolment for the next three years is shown in Table VII.

Stage (iv) The Former Technical and Agricultural Colleges

(a) National Institute of Technology

The former Technical College had its beginning in the Public Works Department School established in October 1925. The School was taken over by the Education Department as a Federal Institution in January 1931. It provided facilities for the training of technical apprentices from the Public Works Department, the Malayan Railways, and later for the Survey Department. In 1933 as a result of the Coales, Watson and Worley Report, the School for the first time took non-government and fee-paying private students. After the war in 1946 the School was reopened and it was subsequently called the Technical College. A new building for the College began in 1951 was formally opened on 1 March, 1955.

On 14 March, 1971 the College was raised to university status and named the Institut Teknoloji Kebangsaan (National Institute of Technology).

As the present site is very cramped and offers little opportunity for further expansion, it is the intention of the Government to resite the Institute. A piece of land was acquired at an approximate cost of $7 million and another $40 million will be spent on providing a new building complex.

The medium of instruction is Bahasa Malaysia. It provides the degree

TABLE VII

STUDENT ENROLMENT 1971 – 1975
UNIVERSITY KEBANGSAAN MALAYSIA

Faculties	Actual			Estimated		
	1970	1971	1972	1973	1974	1975
Arts	112	357	611	349	479	527
Science	25	86	189	300	409	480
Islamic Studies	32	89	196	955	1,258	1,340
Medicine	–	–	–	–	95	165
Engineering	–	–	–	–	40	95
Education	–	–	–	–	–	40
Total	169	532	996	1,604	2,281	2,647

and diploma courses shown in Table VIII.

The enrolment growth of the Institute at diploma and degree level is shown in Table IX.

(a) The University of Agriculture

The School of Agriculture was opened in May 1931 by the Department of Agriculture for the training of agricultural assistants employed by the Government.

On 3 June, 1947 the School was renamed the College of Agriculture, Serdang.

In 1971 the University of Agriculture was established by the amalgamation of the College of Agriculture and the Faculty of Agriculture of the University of Malaya, sited at the Agricultural College, Serdang and providing both diploma and degree level courses. The University now provides the following courses at degree level: (i) Forestry, (ii) Agriculture and (iii) Veterinary Medicine and Animal Science. At diploma level the University provides courses in Agriculture, Home Economics and Basic Science.

Approximately $43.64 million will be spent during the five-year plan period (1971 – 1975) in providing additional facilities. Table X shows the enrolment growth of the University.

UNIVERSITY STAFFING

The present ratios between students and teachers in the various sectors of higher education are the outcome of complex historical factors and of policies that have gradually evolved in individual institutions and departments to meet changing situations and needs.

There are approximately 13 students to 1 full-time teacher in the universities. Out of a total of 2,390 teaching posts in 1972 only 1,736 were filled. This is shown in Table XI.

By 1975 the total student numbers will have increased to over 18,700, but whether the additional staff will be forthcoming is another question. However, the universities themselves have embarked on a staff training programme, and are confident that their requirements will be met.

TABLE VIII

COURSES AT THE NATIONAL INSTITUTE OF TECHNOLOGY

Faculty	Courses Provided	
	Diploma Level	Degree Level
Engineering	Civil Electrical (Power) Electrical (Communication) Mechanical	Civil Electrical Mechanical
Architecture	Architecture Town & Country Planning Quantity Surveying	Architecture Town & Country Planning* Quantity Surveying*
Surveying	Land Surveying	Land Surveying* Valuation*

*These courses will be available in 1973/7·

TABLE IX

STUDENT ENROLMENT: NATIONAL INSTITUTE OF TECHNOLOGY
1959 – 1975*

	1959	1962	1965	1967	1970	1971	1972	1973	1974	1975
Diploma	314	509	682	275	892	753	1,135	1,275	1,500	1,765
Degree	–	–	–	–	–	–	91	220	430	685

*Figures for years 1973 – 1975 are estimated

TABLE X

ENROLMENT: UNIVERSITY OF AGRICULTURE, MALAYSIA
1959 – 1975*

	1959	1963	1966	1970	1971	1972	1973	1974	1975
Diploma	75	75	266	585	819	1,091	1,464	1,588	1,647
Degree	–	–	–	–	–	–	215	479	728

*Figures for years 1973 – 1975 are estimated

TABLE XI

FULL-TIME TEACHING POSTS FILLED AND UNFILLED BY UNIVERSITIES IN 1972

Universities	Approved Post	Post Unfilled	Per cent of Post Unfilled
University of Malaya	1,169	296	25
University of Science	302	67	22
University Kebangsaan	360	96	26
Agricultural University	260	110	42
National Institute of Technology	199	85	43
Total	2,290	654	29

UNIVERSITY DEVELOPMENT COORDINATION

The rapid developments in the field of higher education resulted in the passing of the University & University Colleges Act of 1971. The Act now provides a common legislative framework for all universities in Malaysia. According to the Act no university or university college can be set up without the approval of the Government and all universities and university colleges come under the general supervision of the Minister of Education. A model constitution has been provided and all university constitutions are required to comply with the provisions of this model constitution subject to the power of exemption given by the Yang di-Pertuan Agong.

After the enactment of the above Act the Higher Education Advisory Council was established in August 1972 to advise the Minister of Education on the development of existing universities and on the development of new universities and on such other matters as may be referred to it by the Minister. The Council consists of sixteen members of which I am the chairman. The members of the Council have been chosen to represent virtually every interest in the country from men and women who command public confidence.

CONCLUSION

In conclusion I might add that in terms of numbers and students and institutions, and Government expenditure in university education, the figures are quite impressive. This expansion of higher education as I have stated earlier in the paper is the result of demographic increase, newly awakened educational and social aspirations, and the need to give equal opportunities.

A noticeable new influence in the development of higher education in Malaysia in recent years is the adoption by the Government of planning as a means of economic and social development, and of educational planning for a balanced growth of the educational system within the framework of overall national plans. The plans focus attention on the roles and functions of higher education in meeting the manpower needs of the country.

Another recent development is the shift in the balance between science and technology on the one hand and humanities and social sciences on the other. The shift in favour of science and technology has been effected by the Government by the establishment of the Universities of Science and of Agriculture and by the upgrading of the Technical College to university status. The University of Malaya on the other hand will devote special attention to developing postgraduate levels in the fields of science, medicine and technology.

Another phase in the development of higher education that is receiving

attention is the relevance of higher education to the national context, and how it can contribute more towards national development.

Another expression of the same trend is the establishment of the University of Science outside the national capital, 200 miles away in Penang, so as not only to spread universities fairly throughout the country but also to use universities as growth points not only for national but also regional development.

Thus in tracing briefly the development of universities in Malaysia, I hope this paper draws attention to some of the problems relating to the expansion of university education in Malaysia.

'COUNTRY REPORT'
RECENT DEVELOPMENT AND GROWTH OF HIGHER EDUCATION IN SINGAPORE

Louis H. Y. Chen and F. A. Vasenwala

INTRODUCTION

Singapore was beset by serious unemployment in the late 'fifties. This was because her economy consisted mainly of entrepot trade which was not growing fast enough to cope with the burgeoning labour force. In 1960 an industrialization programme was launched with a major objective to provide job opportunities. As the island has no natural resources except for its location on international trade routes, the strategy of industrialization was based on the development of human resources.

Despite many problems that confronted Singapore in the 'sixties, she experienced a rapid shift in her economy. Between 1965 and 1969 she attracted an influx of labour-intensive low-skill industries with her stable and low-wage labour situation. By the end of the decade, she had transformed herself from a labour-surplus trade-centred economy to an increasingly labour-scarce industry-based economy. The focus now is on industries with more advanced technology and strong export orientation. For the 'seventies it is envisaged that Singapore will become a regional centre of technological know-how and professional expertise.

The development and growth of higher education in Singapore is closely related to her economic planning and development. The foregoing introduction is therefore necessary as a backdrop.

HIGHER EDUCATION SYSTEM

There are six institutions of higher education in Singapore – the University of Singapore, Nanyang University, Singapore Polytechnic, Ngee Ann Technical College, Singapore Technical Institute and the Institute of Education. A major task of the universities is to provide high-level manpower training relating to national development. The technical colleges are responsible for the training of technicians and the Institute of Education provides teacher education in all of the four language media. With the exception of the University of Singapore whose origin dates back to 1905, all the institutions were established after the Second World War, with Nanyang University, the Polytechnic and the predecessor of the Institute of Education, namely, the Teachers' Training College, established in the 'fifties, and the other two institutions in the 'sixties.

The admission procedures in the institutions are selective. University candidates for the undergraduate programmes must hold either a Cambridge, Chinese or Malay Higher School Certificate, whereas technical college candidates are to have the Singapore-Cambridge General Certificate of Education "O" level or its equivalent.

University of Singapore

The University of Singapore has Faculties of Arts and Social Sciences, Law, Science, Medicine, Dentistry, Engineering and Architecture, Schools of Accountancy and Business Administration, Pharmacy, Postgraduate Medical Studies, Postgraduate Dental Studies and a Department of Extra-Mural Studies. General degree courses of three years' duration are offered in arts and social sciences, science and business administration. Students who wish to specialize are selected to undergo another year of study.

The University conducts postgraduate programmes in all disciplines. Postgraduate diploma courses are conducted in public health, fisheries and business administration. The Dental and Medical Graduate Schools train and certify specialists in their respective professions. In addition, the latter also plays an important role as a regional centre for postgraduate medical education.

Nanyang University

The University has Colleges of Arts, Science, Commerce and Graduate Studies. Courses leading to the degrees of Bachelor of Arts, Science and Commerce are of three years' duration. The Pass Degree is awarded on a credit system. Students who have within the period of three to five years obtained a total of 108 credits and who have passed the final examination are awarded the Pass Degree. Those with outstanding grades may study another one year for the Honours Degree.

Singapore Polytechnic

The Polytechnic comprises the School of Industrial Technology and School of Nautical Studies. The former offers diploma and certificate courses of three years' and two years' duration respectively. Part-time diploma courses are also conducted but are of four years' or five years' duration. The aim of the School is to train technical personnel to fill the gap between the engineer and craftsman. The diploma courses deal in depth with a specific area of technology whereas the certificate courses provide broader training so as to fit the students for a wide range of industrial occupations. The School of

Nautical Studies seeks to train young men to become deck officers and radio officers on board merchant ships, as well as to give further academic education to merchant navy officers who are seeking advancement in their career.

Ngee Ann Technical College

The College has Departments of Mechanical Engineering, Electrical and Electronic Engineering and Commerce and offers diploma courses of three years' duration in these fields. It adopts the two semester system with an intake of students in each semester. A student must pass the examination at the end of each semester before he is allowed to proceed to the next higher class.

Singapore Technical Institute

The Institute places emphasis on the acquisition of practical skills rather than extensive engineering knowledge. It conducts full-time courses of two years' duration and day-release or part-time courses of three years' duration. The latter courses are for graduates of the vocational institutes and others who satisfy the admission requirements and are suitably employed in industry.

Institute of Education

The Institute is the only institution responsible for teacher education in Singapore. It provides pre-service training of primary and secondary school teachers in all four official languages media and conducts in-service course for qualified practising teachers. It also prepares university graduates for the Diploma in Education, Master of Education and Ph.D. in Education awarded by the University of Singapore.

HIGHER EDUCATION GROWTH

The industrialization programme in the 'sixties created a demand for middle-level technical personnel. The Polytechnic, which was established in 1954, underwent some major changes in the early 'sixties so as to relate more closely to national needs. As a result, the courses were reorganized into technician and professional levels. Arrangements were later made whereby students reading the professional courses would be awarded degrees by the University of Singapore. Serious thought was then given to the raising of the status of the Polytechnic to that of a university. After much consideration, it was decided that the Polytechnic should confine itself to the training of technicians to meet the growing demand for skilled middle-level manpower. In 1969, the degree stream of the Polytechnic was transferred to the University of Singapore where the Faculties of Engineering and Architecture and the School of Accountancy and Business Administration were established.

Ngee Ann Technical College (then Ngee Ann College) was established in 1963 as a private institution offering degree courses in arts, science and commerce. The role of the institution was later reviewed and with the recommendation that was tabled, it was changed in 1967 into a public institution offering technician diploma courses in engineering and commerce.

Despite the expansion of technical education all through the 'sixties, the need for technical manpower at all levels became more urgent towards the end of the decade. A new significance was accorded to the training of high-level manpower which was viewed as a key ingredient for further national development. This new phase of manpower need was brought about partly by the economic planning for the 'seventies which would focus on industries with more advanced technological know-how and strong export orientation, and partly by the necessity to accelerate the industrialization programme in the light of the economic implications of the British military pull-out to be brought forward from 1975 to 1971. The problem was further compounded by the lack of appropriate training facilities precipitated by the political development of Singapore. For in 1959, in a reorganization of the University of Singapore (then the University of Malaya) into two autonomous divisions of equal status, the Faculty of Engineering was moved to Kuala Lumpur. When Singapore was separated from Malaysia in 1965, she was left with the Polytechnic as the only higher institution responsible for the training of technical manpower.

A major mobilization of resources was launched in order to gear up higher education towards the training of both the middle-level and high-level manpower in the technical and professional fields. Thus in 1968, a separate Technical Education Department was established in the Ministry of Education to administer technical education and industrial training and to coordinate technical courses at Ngee Ann Technical College and the Polytechnic. In the same year, a special Ministry of Science and Technology was set up to coordinate manpower requirements with economic and scientific developments. The Minister for Science and Technology is also the Vice Chancellor of the University Singapore and Chairman of the Board of Governors of the Polytechnic.

While the Polytechnic and Ngee Ann Technical College were further expanded, a new institution, Singapore Technical Institute, was established in 1969 to meet the growing demand for technicians. The universities, on the other hand, were given the task of training skilled high-level manpower. The only public university, the University of Singapore, was given priority for its development. More professional courses relating to the nation's economic

planning were introduced. A main and urgent objective in the development of the University was to strengthen and expand the Faculties of Engineering and Architecture and the School of Accountancy and Business Administration.

The beginning of the 'seventies witnessed an unprecedented growth of higher education in the technical and professional fields. The total student enrolment in the Polytechnic and Ngee Ann Technical College in the period 1969 – 1972 registered an average annual growth rate of 26.4% which was 4.4 times the average annual growth rate between 1962 and 1969. In the University of Singapore, the average annual growth rate of student enrolment in the Faculties of Engineering and Architecture and the School of Accountancy and Business Administration in the period 1969 – 1972 was 33.1%, whereas the maximum annual growth rate in other disciplines between 1962 and 1972 was only 13.2% (see Appendices I and II). Despite the rapid growth, higher education in Singapore has become even more selective. This is reflected in the general decline of the percentage of student intake among the applications received since 1969 (see, for example, Appendix III).

In view of the economic planning for the next decade and its manpower implications, it is anticipated that rapid growth of higher education will continue through the 'seventies. Implementation of massive development projects for further expansion of the University of Singapore, the Polytechnic and Ngee Ann Technical College is already under way. Under these projects, the University of Singapore will be relocated at a new campus of 472 acres at Kent Ridge and the Polytechnic will move to an 81-acre piece of land at Dover Road. According to forecasts, both institutions are likely to reach a student enrolment of 8,000 in 1980. Ngee Ann Technical College has already moved to a new campus with 40 acres of land at Clementi Road. When the project is completed, the College is expected to cater for a student enrolment of 3,000. A Ten-Year Development Plan for Nanyang University has recently been proposed and is being reviewed by the Ministry of Education.

BALANCE OF TECHNICAL MANPOWER

The undertone of the contents of papers presented in the various conferences connected with the institutions of higher learning in this region tends to highlight the role of universities with little reference given to technical colleges which are responsible for the training of middle-level technical personnel. Experiences gathered from highly industrialized countries suggests the necessity of having a proper balance of skilled and technical manpower. A country relying on an industrial economy must train sufficient scientists, engineers and other top-level people together with sufficient technicians,

craftsmen, semi-skilled operatives and others to support them in order to develop and operate the industries.

The time required to train a technician is usually much shorter than that needed to obtain a degree in science or engineering. The teaching staff in the technical college generally need not possess academic qualifications as high as those required for appointment in the university. Its recruitment and training should therefore be a relatively easier exercise and incur fewer expenses than that of the university staff. If not enough technicians are trained, then the industries may be forced to employ overqualified personnel such as scientists or engineers to perform jobs that could be done equally well by technicians. This not only would inhibit investment but also is a considerable waste of manpower and resources. All the above considerations strongly suggest that the training of technicians as a supporting work force should be given due attention if an industrialization programme is to be carried out successfully.

In the context of Singapore, it is assumed that three technicians are required to support every scientist or engineer and that two scientists are required for every engineer. Based on this assumption and the figures available from manpower planning, Singapore would require an output of 4,800 scientists, 2,400 engineers and 21,600 technicians for the next decade. Rapid expansion of not only the universities but also the technical colleges are therefore necessary in order to meet these large projected manpower figures.

The foregoing views were taken into consideration in the coordination of manpower training in Singapore. While the training of high level manpower is emphasized, technical education at all other levels is, at the same time, expanded to achieve a balance which is in line with the country's industrialization programme.

SOME PROBLEMS OF RAPID EXPANSION

The developments of the University of Singapore and the Polytechnic face similar space problems. When the Faculty of Engineering of the University of Singapore was established in 1969, it was housed in the same building as the Polytechnic. Because of the extremely high value of the land occupied, it was decided that the Polytechnic and the Faculty of Engineering should be relocated. While a new site, Kent Ridge, has been chosen for the University of Singapore where all faculties will be integrated, the Polytechnic will be relocated at Dover Road. Construction at the Kent Ridge site is already under way. In the meantime, more branch campuses have been established, in order to meet the urgent need. The Faculty of Architecture of the University of

Singapore is temporarily located at Lady Hill bringing the total number of campuses to four, namely, Bukit Timah, Lady Hill, Prince Edward Road and Sepoy Lines. The main campus of the Polytechnic at Prince Edward Road has reached its maximum capacity for expansion. Two more campuses at Ayer Rajah Road and Princess Mary Barracks have therefore been temporarily established.

However, the temporary dispersion of campuses at various distant locations is likely to create administrative difficulties and curtail operational efficiency. It also tends to discourage human contacts among various disciplines resulting in a possible setback in the drive towards interdisciplinary studies.

On staff recruitment, a common problem facing most institutions of higher education undergoing rapid expansion is the shortage of qualified personnel in the disciplines of demand. This problem is often compounded by the disparity of salaries as offered between the private sector and the institutions, which tends not only to draw staff from the institutions but also to discourage the qualified professionals from joining them as full-time staff.

To alleviate the shortage, the institutions of higher learning in Singapore generally look overseas for recruitment and utilize part-time personnel as a temporary remedy. The recent economic recession in the major Western countries has worked to the advantage of the University of Singapore. As a result, it has been able to recruit from overseas sufficient staff for the Faculty of Engineering. The School of Accountancy and Business Administration is perhaps the only school or faculty experiencing some difficulty in the staff recruitment.

The shortage of staff experienced by the Polytechnic has resulted in heavy employment of part-time personnel. The reliance on large number of part-time staff members to conduct courses of the same level is causing great difficulty in achieving uniformity in subject treatment and standard in the classes concerned. However, the Polytechnic, which in the past has employed university science graduates to teach mathematics and science subjects, is now recruiting more science graduates to teach low-level technical courses as a partial solution to the shortage problem. Although these graduates possess no industrial experience, there are schemes whereby they may receive technical training and gain industrial experience. For example, a batch of science graduates are now being trained by allowing one day off from their teaching activities to attend a technical course and later to be attached to the industries for a period up to six months.

CURRICULUM DEVELOPMENT

The efficiency of a graduate in his occupational role depends greatly on the relevance and quality of tutelage he received in the university or the technical college. Apart from expanding the training facilities in the disciplines where the graduates are in demand, the key directive for curriculum development in the universities in Singapore is the interdisciplinary undergraduate programme. Industrialization requires Singapore to move with the rapidly changing environment of modern technology. The universities therefore have to prepare students in the non technical fields to understand and deal effectively with modern science and technology. Those in the sciences or technological fields must, on the other hand, be given training broad enough and with emphasis on mental agility and flexibility, so that they can deal directly with technology not only as practising scientists or engineers but also as managers, advisers and public administrators.

With the foregoing view, the University of Singapore has recently made it compulsory for all science and engineering students to read an arts or social sciences course in the first three years of the undergraduate programme, and similarly for all arts and social sciences students to read a science course in the first two years. These courses are specially designed. The subject matters are so chosen as to prepare the students to function more effectively later in their occupational roles.

In a similar effort to provide a broader education and avoid narrow specialization, the Faculties of Arts and Social Sciences in the University of Singapore have recently merged into a single faculty – called the Faculty of Arts and Social Sciences. Like those in the Faculty of Science, students in the Faculty of Arts and Social Sciences will not be allowed to read a one-subject honours course until the fourth year. Since last year, the sub-department of Statistics in the same University has been abolished and Statistics is now incorporated into the Department of Economics which has been renamed Department of Economics and Statistics.

In Nanyang University, steps are being taken so that the academic programme will be more faculty-oriented. On this, Dr. Lee Chiaw Meng, Minister for Education, said at the 1973 convocation ceremony of the University, "The students, instead of department-based, will be faculty oriented, and more interdisciplinary programmes will be introduced. Various departments/faculties will have to be reorganized and the course content revised to give it a more practical bias."

A broader educational programme at the university level naturally

extends downwards to the pre-university level. A new science curriculum for the pre-university classes will soon be introduced in secondary schools and junior colleges, where physical science will be taught in lieu of physics and chemistry, and mathematics in lieu of pure and applied mathematics. This system will allow a pre-university student to be taught a larger number of subjects, thus enabling him to have a wider choice of courses when entering the university. It will also prepare him to engage with greater ease in inter-disciplinary studies in the university.

In the Polytechnic, it is felt that the courses offered for the technicians should be neither too general nor too specialized. An approach is taken which provides a broad background of basic science and technology in the first year followed by some specialization in the second year for the Industrial or Certificate Technician and further specialization in the third year for the Engineering or Diploma Technician. Certain degree of diversity and flexibility is provided in the second year in the form of optional groupings of subject. It is very desirable to structure the courses in such a way as to enable each subject or group of subjects to be optional and replaceable in the event of changing demands by industry. With such a diversity of studies and flexibility of the course structure, it is expected that the graduates from the courses will find employment in a wide range of industries.

The university does not assume only the role of training high-level manpower. It is also responsible for the shaping of national character. At the 1973 convocation ceremony of the University of Singapore, Dr. Toh Chin Chye, both Vice-Chancellor of the University of Singapore and Minister for Science and Technology said:

> "Within the context of Singapore's history and social development, there are three institutions which I believe can help in the building of national character. They are family upbringing itself, the schools and institutions of higher learning and national services."

He continued:

> "It is not enough therefore for the universities to act as simple educational agencies on behalf of the professions. Students must be impressed with the need to observe codes of conduct .... We would have failed if our students while acquiring knowledge relating to the business of life are not also taught to think in terms of national self-preservation .... If the university is a place where academic minds can reflect and research it is also a place for preparing for the future."

CONCLUSION

Singapore has been able to direct and regulate the growth of higher education so as to achieve a satisfactory balance between the supply and demand of manpower. This is partly reflected in the graduate employment situation where it is found that the majority of the university graduates find jobs within three months after leaving the university and practically all technicians are employed after graduation. Indeed, there are strong indications of almost full employment and that there is no persistent unemployment problem among the graduates.

For the 'seventies, the emphasis is on quality. It is expected that consolidation and stability of higher education will be achieved by the end of this decade.

APPENDIX I

STUDENT ENROLMENT, 1962 – 1972

Year	University of Singapore	
	Accountancy/Business Administration Architecture Engineering	Other Schools and Faculties
1962	–	2,149
1963	–	2,433
1964	–	2,572
1965	–	2,870
1966	–	3,012
1967	–	3,283
1968	–	3,714
1969	1,133	3,426
1970	1,646	3,034
1971	1,966	2,737
1972	2,258	2,676

APPENDIX II

STUDENT ENROLMENT, 1962 – 1972

Year	Nanyang University	Singapore Polytechnic	Ngee Ann Technical College
1962	2,110	2,735	–
1963	2,324	2,259	389
1964	2,273	2,299	688
1965	2,126	2,335	873
1966	1,851	2,642	852
1967	1,750	2,963	400
1968	1,991	3,343	356
1969	2,040	3,310	586
1970	2,233	4,094	609
1971	2,264	4,507	1,029
1972	2,513	5,764	1,216

APPENDIX III

PERCENTAGE OF STUDENT INTAKE/APPLICATIONS RECEIVED

	1969	1970	1971	1972	1973
University of Singapore					
Accountancy	20.2	32.7	20.5	20.8	22.1
Business Administration	38.2	32.7	29.7	37.8	27.7
Architecture	68.1	72.2	42.1	35.4	31.1
Engineering	53.2	56.1	31.7	29.6	32.9
Arts/Social Sciences	47.9	35.3	34.6	36.9	35.7
Science	81.1	32.2	32.1	28.9	28.0
Medicine	25.0	32 5	37.8	30.9	28.1
Singapore Polytechnic	41.8	39.9	36.9	36.8	35.6

'COUNTRY REPORT'

HIGHER EDUCATION DEVELOPMENT IN THAILAND

Wichit Srisa-an

INTRODUCTION

Like the other nations of Southeast Asia, Thailand is experiencing a period of constantly accelerating diversification and growth in its institutions of higher education. The need for such change was initially stimulated by the revolution in manpower requirements and social attitudes which followed World War II, and then skyrocketed when the Southeast Asian Conflict precipitated a vortex which drew the latest foreign technology into Thailand at a rate almost too fast to permit assimilation. As attention from abroad started local industries spiralling, the urgent need that arose for specialists in fields which had barely progressed beyond the zero point before 1960 became an issue that is probably familiar in all countries in the area.

Although it was accomplished under enormous pressure, however, postwar high-level educational development in Thailand did not begin from scratch, nor did it lack organization. Even the most innovative recent policies have evolved from a tradition which can be traced directly back to the foundation of the country's first university, Chulalongkorn, in 1917. The task of Thai educational planners and administrators was, therefore, not only one of funding and staffing the flash flood of new degree-granting educational institutions, but also of controlling and consolidating it into a form reconcilable with the system of education which has grown along with Thailand's modern culture and economy for more than half a century. Only in such a way could a sense of continuity and national identity be preserved in arranging to meet the explosion of instructional and manpower needs triggered by new concepts of industry, technology and management sweeping in from abroad.

Before discussing current and projected measures for expanding and controlling higher education, it may be useful to consider the historical development of Thai university-level education.

HISTORICAL PERSPECTIVE

Thailand's first universities were founded exclusively to provide skilled personnel for government service. By the time Chulalongkorn University achieved its status as a university by Royal Decree in 1917, it had already existed since the end of the previous century in a series of embryonic forms, such as the Royal Pages' School and the Civil Service College.

Until well into the post World War II period the growth of Chulalongkorn University corresponded exactly with steps taken for modernization of the Government. Expansion of the curriculum occured only when specialists were needed in areas not covered by existing educational facilities. Students desiring knowledge in fields of study beyond the compass of Thai university curricula for reasons unconnected with government work comprised a tiny elite who pursued their education abroad.

Immediately after the Revolution of 1932 which transformed Thailand from a monarchy to a democracy the need was felt for government officials trained in the techniques of democratic government. In response the University of Moral and Political Science (Thammasat University) was established in 1933 to provide the type of training necessary to produce political leaders and civil servants of the new type.

Total affiliation between the Government and the universities underlay the foundation of three more institutions in 1942: the University of Medicine (Mahidol), the University of Agriculture (Kasetsart) and the University of Fine Arts (Silpakorn). Once again the function of these institutions was to provide government personnel trained to a high-level of competency in their respective disciplines and professions.

By the time World War II came to a close, consequently, there were five universities established in Thailand, and although their specialization may called into question their status as universities, their combined function as an organized system of higher education cannot be denied.

After 1945 this system became the foundation of a new era of controlled development that may be the most intense ever experienced anywhere. As the media and transportation facilities which had been developed to vastly increased levels of efficiency by the needs of the war began to homogenize world culture, the previously rather hermetic traditions of Thailand were brought into contact with progressive Western methods under high pressure. The university educational system as it stood became obsolete, geared as it was to the needs of the prewar Government.

As advisers began to pour in from abroad, the cry went up for the first time from private industry for experts trained in areas of technology previously unheard of in Thailand. With the coming of the Indochina War in the early 'sixties and its subsequent escalation, this process of adaptation and diversification became so frenetic that a series of five-year development plans

was put into action to help steer it toward fulfillment of burgeoning manpower and research requirements. The forces affecting development of higher education had completely shifted. Before the war the university functioned as a training ground for government personnel. The developments of the postwar decades catapulted it into the role of supplier of specialized manpower to both public and private sectors and consequently the most important force in national development.

Furthermore, recrystallizing social demands began, for better or worse, to place university education in a seductive light it had not previously enjoyed. The phenomenon observed by Dr. Ivan Illich came powerfully into play as high level education became the ultimate status symbol, dividing those who had "made it" from those who had not. The number of high-school graduates demanding access to higher education shot up.

All of these potent stimulants to growth were amply fertilized by assistance from abroad.

By the late 'sixties and early 'seventies, institutions of higher learning organized around specialized areas of learning were opening at the rate of almost one a year, along with more diversified institutions founded for the first time outside the capital city of Bangkok. The University of Chiang Mai opened its doors in 1965 to be followed by Khon Kaen University (1966), the National Institute of Development Administration (NIDA, 1966) and Prince of Songkla University (1968). In 1969 a law was passed permitting the establishment of private colleges, actually high-level vocational schools, which were the first institutions of advanced learning ever to operate in Thailand which were not under direct government control. Despite their having no direct link with the Government, these private colleges organize their curricula to satisfy manpower requirements by emphasizing technical and business studies, thus illustrating once again the importance of manpower demands as the chief force behind educational development in Thailand.

The concept of the Open University made its debut in Thailand with the inception of Ramkamhaeng University in 1971. The aim of Ramkamhaeng University is to make higher education available to students who, either for financial, geographic or academic reasons, have no access to the country's selective admission universities. As no graduates have yet been produced, it is not yet possible to determine whether this Open University concept has succeeded in its goals. The nature of the Open University does, however, invite rethinking of the potential role of the Open University in Thailand.

The idea has been advanced, for example, that the Open University might provide the ideal answer to the country's crucial need for "second chance" education. Working professional people would accordingly be able to update their knowledge by enrolling in courses which would not conflict with their work schedules, others who were forced to interrupt their studies to seek employment would be able to continue study on their own time.

THE PRESENT SITUATION

Although Thai university education is now approaching the point where it can be considered favourably in quality and scope against the international standard, there are still many obstacles that pose severe problems to administrators working in the field of educational planning. As the central agent of national development, the university is being called upon to meet manpower requirements that would have been unimaginable a decade ago. Computer technology, new agricultural and mining methods, medical technology and advanced teaching techniques are a few of the dozens of areas of knowledge that have shifted from the periphery to the centre of concern.

But although Thailand now has specialists in most of these fields, they are far too few. Before the country's universities can fulfill their basic functions of performing research and dissemination of knowledge, crippling shortage of staff, funding and facilities must be alleviated. Although these needs are most pressing in the upcountry institutions, even the best endowed of the universities in the capital are severely handicapped by these lacks.

As it became obvious that an intense development effort would be required to provide the resources necessary to sustain high quality programmes, a series of five-year development plans was proposed. These plans aimed to foster controlled expansion and focus it directly into those areas considered critical in relation to national development. The first two Educational Development Plans were oriented directly toward economic development, with the object of providing high-level manpower The Third Plan, currently in effect, in addition to supplying high-level manpower has been formulated in response to requests from the universities for a greater emphasis to be placed on research and social and cultural development. Institutes for Population Studies, Thai Studies, and Computer Science have been established in several universities under the provisions of the Third Plan.

To increase the number of staff members teaching in such critical areas of specialization as biology, chemistry, physics, mathematics, economics and English, funding is available to send outstanding instructors in high demand

fields of study to pursue doctoral studies abroad.

To date the plans have been largely successful in channeling educational expansion to the national advantage. There have been miscalculations – as is inevitable when long-range forecasts must be taken as the basis for policy-making – resulting in overfulfillment of certain formerly pressing manpower demands. At present, for example, more engineers have been trained than can be absorbed. But the advantages of the plans greatly outweigh the mistakes, and the Educational Development Plan project has so far been a qualified success.

PROBLEMS AND PROSPECTS OF EXPANSION AND CONSOLIDATION

As should be evident by now, most innovations in the Thai higher education system have been in the direction of expansion, as consolidating measures were more or less built in to the policy of allowing university growth to follow the lines of the existing system. Most of the problems that have been encountered in the postwar boom have found their solutions in the exercising of selectivity and control over logical extensions of this system. Still, the almost total specialization of most of Thailand's universities into the decade after the war suggested that the effectiveness of the system, and its capacity for accelerated growth, would be strongly enhanced by a consolidating move.

This need was diagnosed by Sir Charles Darwin when he visited Thailand under the auspices of UNESCO in 1954. After discussing the unsuitability of the word "university" when applied to such specialized institutions as the University of Fine Arts and the Medical University, and lamenting the lack of a shared set of standards among Thailand's five universities, Sir Charles speculated:

> "The best way of reforming the institutes of higher learning in Thailand will be to adopt a general pattern like that of London. The five universities should be called colleges and combined into a single federal university like the University of London, though there is no need to follow the details of its construction exactly. As long as Bangkok is the only strong centre of learning in Thailand – and merely on account of the shortage of suitable staff this must certainly be so for many years – there is no need for a second body like the University Grants Committee to exist separately, since the governing board of the university could fulfill both functions."[1]

[1] Darwin, Sir Charles, Report to UNESCO on Science in Thailand, UNESCO, 1954, p. 31

Although its recommendations were not followed exactly, Sir Charles' report exerted a strong influence on government university policy. The five universities were not grouped together into a single institution, instead, in 1959 they were put under the direct control of the Office of the Prime Minister. Under this arrangement, teaching and academic standards were aligned and the stimulation and control of growth more effectively achieved.

The next major official consolidating effort was made in 1972, with the setting up of the State University Bureau. The close cooperation made possible through the establishment of the Bureau has produced in Thailand's state higher education system a "family of universities" that is very much in the spirit of the improvements envisioned in the Darwin report. The State University Bureau fulfilled for the first time the need for a single consolidating agency which permitted the universities themselves to have access to the Cabinet.

Each university is given the status of a government department within the State University Bureau, and university teachers are civil servants receiving salaries and fringe benefits equivalent to those of civil servants in other government departments and ministries.

Another coordinating measure is the bimonthly Rectors Conference. Not an official body, the Conference facilitates communication between the twelve currently existing state institutions of higher education by giving the rectors of these institutions an opportunity to exchange ideas and discuss problems which are of common concern to all universities. The Conference does not intrude into matters of specific concern to one particular institution, its distinguishing feature is its limitation of discussion to issues of common interest to the member institutions.

Finally, joint research projects, cooperative programmes involving such procedures as faculty exchange, a common academic calendar, the sharing of certain facilities, and student cross-registration all play roles in consolidating the higher education system.

The prospects opened up to further controlled expansion of Thai higher education by the people's coup which took place in Thailand on the 14 of October, 1973 are exhilarating. Before further balanced growth can [illegible] of course the long standing obstacles of underqualified staff, inadequate resources and inertia within the university system itself must be overcome, but the greatly increased latitude for action that has followed the [illegible] much extended range of approaches to these problems.

Since the State University Bureau is the nerve centre of the state university system, it is through the reorganization of this body that new methods of formulating policy can be put most efficiently into effect. Among the most urgent issues which must be taken into account in this restructuring are

1. University Autonomy

   The state universities have reached the level of development where they are in a position to manage their internal affairs independently. A loosening of government control, particularly as regards funding, is therefore essential if progress is to be made. At present the universities are funded by means of an itemized budget. Far preferable would be financing in the form of block grants, which would permit the universities to make allotments according to their needs. Autonomy would also vastly reduce the red tape involved in effecting administrative and staff changes.

2. A Change of National Policies Regarding Management of Education

   Since the October coup, the private colleges have begun to demand university status and consequent membership in the State University Bureau. Some response to this demand must be found, perhaps by allowing the Ministry of Education to take charge of primary and secondary education and recasting the State University Bureau as a Bureau of Higher Education, which would coordinate the functions of all degree-granting institutions.

3. Student Power: A New Sense of Student Participation

   The passionate interest of the Thai students in democratic government is testified by the fact that the uprising responsible for establishing Thailand's new Government was principally a student uprising. Now that the first steps have been taken toward establishing a true democracy in Thailand, the students have been very quick to point out the necessity of educating the people in democratic methods. The realization of this goal, extension of education through the students to the people, will represent the best possible interpretation of the concept of university expansion in the service of national development, and the importance of setting up a meeting ground for student leaders and university administrators as quickly as possible cannot be overstressed.

   It has been proposed that a coordinating body be formed at the

ministerial level to which both student and university representatives could be attached. The body would act to facilitate realization of the new goals. Shortened terms and reorganization of instruction have been suggested among many other possibilities to permit faculty members and students to join hands in the search of truly democratic education.

CONCLUSION

The mood prevailing in the Thai academic community at the moment is one of optimism in the face of an enormous task. The need to expand continues to overshadow the need to consolidate. The days when Sir Charles Darwin could state that "Bangkok is the only strong centre of learning in Thailand and ... must certainly be so for many years" are now well in the past, but the need to carry education out of the cities still has top priority. The establishment of community colleges, "second chance" education and comprehensive mass media educational programmes are all under consideration. All of these hopes again represent new limbs of a system that is growing to maturity under the guidance of carefully planned control programmes. Controlled expansion, rather than consolidation, continues to be the dominating requirement of the Thai higher education system.

The changeover from a military to a democratic civilian government is still so recently in the past that it is impossible as yet to appreciate the potential advantages that it promises to higher level education. One point is extremely clear, however: a democratic government and its educational system must reinforce and instruct each other. As of now, our primary goal is to ensure this interrelationship.

'COUNTRY REPORT (PHILIPPINES)'

Augusto L. Tenmatay

In the Philippines educational system, six years of compulsory elementary schooling are followed by four years of secondary education, four or more years of college studies, and a year or more of graduate work. Special programmes for post-secondary technical and occupational training in subprofessional areas are also available. Only elementary education is free. Participation rates, calculated as proportions of age groups are:

97% in elementary level (includes enrolment below and above 7 – 12 age bracket)
35% in secondary level (13 – 16 age bracket)
17% in tertiary level (17 – 20 age bracket)

The Philippines ranks second in the world (first is U.S.A.) in enrolment at the tertiary level per 100,000 population.

Of every 100 children who enrol in the first elementary grade, 56 reach the sixth grade, 23 finish high school study, and 12 complete college work.

The literacy rate is 83%, which is above that for most countries. The urban rate is 93% while the rural rate is 79%.

The Government allocates about one-third of the National Budget for education (1.2 billion in 1972), distributed among public educational institutions as follows:

80% for elementary and secondary levels
6% for technical institutes
14% for state colleges and universities

The enrolment pattern in the public system is:

Elementary Level	96%
Secondary Level	33%
Tertiary Level	7%

The private educational system takes care of the rest without loan or support from the Government.

The 7% (about 60,000 students) in the public tertiary system are enrolled in 6 state universities, 21 state colleges, 3 normal schools, and about a score of technical institutes. The 93% (about 800,000 students) in the private tertiary system are enrolled in 33 private universities and 567 colleges and institutes. The average fee in public institutions is about 250 pesos a semester (free tuition in agricultural units) while fees in private institutions range from 130 to 900 pesos for a semester. The 646 public and private institutions of higher learning produce 100,000 college graduates annually.

The above data show that Philippines education is a vast and prolific enterprise. The stress laid on it is indicated by the ratio (almost 7%) of total public and private expenditures in education to the GNP – a very high figure considering that the per capita income of $200/year is about one-tenth of that of the U.S.A.

A system of low-cost higher education, with entry to most institutions determined only by the ability to pay, catering to a population of 40.8 million with an average age of 17 years who place high social value and economic worth to college degrees, will obviously have a very large collegiate enrolment. Only a few prestigious public and private institutions have strict admission requirements. The majority of students come from urban centres where family incomes are higher than the national average and where most of the institutions of higher learning are located. The mean family income in Greater Manila, for example was 7,782 pesos per year in 1971 which was more than twice the national mean of 3,736 pesos.

The percentage of families with incomes of 10,000 pesos or more per year for the whole country is only 2.6%. Those with family incomes of 3,000 pesos and less constitute 77% of the total. Since most college students are supported by their families, the majority of students come from the rich and middle classes. Still, intergenerational mobility is relatively high. An appreciable number belongs to poor families who make great sacrifices to send their children to college. Higher education is much more open to children of the poorer classes than it is for children of comparative classes in developed countries. Understandably, the income pattern governs the enrolment picture as well as the offerings of schools. In the private schools, 75% of the academic programmes are of the low investment non-laboratory variety. Two needs stand out (1) better distribution of programmes to meet manpower requirements, and (2) further democratization of access.

The mobility aspect brings to mind another kind of mobility of the

Filipinos exodus. To illustrate 10 highly skilled Asians who migrated to [illegible] is not confined to developed countries. Of 10 highly skilled persons in the world who migrated in 1970, two were Filipinos. Many graduates go abroad not to migrate but to get further training and or to work for a few years at salaries much higher than they can command at home. Physicians, nurses, engineers and scientists lead the pack. Almost half of the physicians produced in 1969 -- 1970 went abroad soon after graduation. It is certain that more of that class have gone abroad after the count was made in 1972 and more will go later. It can be said that the Philippines has a flourishing export business in professionals, which at the same time presents a serious brain drain problem.

The large enrolments, the mobility and the entrepreneurship can be traced to the libertarian ethics of the Filipinos, the source of much of the strength of the country, but at the same time the cause of many difficulties now and in the future.

The school system serves a population of 40.8 million people distributed in 7,100 islands with an aggregate area of 115,741 square miles, organized into about 70 provinces and more than a score of urban centres. Cities with population of 100,000 and over are occupied by 16% of the population. Institutions of higher learning are in or close to these cities. The metropolis of Greater Manila and the neighbouring industrializing province of Rizal have 136 institutions (1.5 of the total number), consisting of 1 public and 14 private universities, 4 public and 117 private colleges serving more than half of the national collegiate enrolment. This geographical distribution obviously poses problems. It also promotes flow to the urban centres.

With a population growth rate of 3.3%, it is estimated that the population will rise to 42.5 million in 1975 and 50.5 million in 1980. The estimate of distribution for 1975 is 55% for age group 0 – 19 years, 43.3% for age group 20 – 64, and 1.7 for age group 65 and over. Extrapolation of present trends gives a projected collegiate enrolment of 1,000,000 in 1975 and 1,900,000 in 1980. The Government cannot support these enrolment levels. Doubling of current expenditures in higher education will only raise present support from 7 to 15 of total enrolment. If such money were now available, it would go for improvement rather than for expansion of the public system since most of the institutions (chartered, independent of the Department of Education and Culture and of each other) are inadequately financed, staffed and equipped. The Government will have to continue to lean on the private sector for many years to come.

The prospect of greatly expanded demand for college education may not materialize. As costs of education rise along with the general increase of prices and taxes, the shrinking breadwinner group in the 20 – 64 age category will find it progressively harder to provide college education to their children, unless, of course, net incomes increase faster than costs for the majority of families. There are some indications that the turning point may have been reached this year. College enrolments dropped or levelled off except in agriculture and related fields where unexpected increases were registered. Officials of agricultural colleges attribute the rise to the increase of job opportunities generated by the institution by the Government of massive programmes in rural uplift and regional development emphasizing agrarian reform, improvement of agricultural production and the creation of labour-intensive small-scale industries in the agriculture-related processing and service areas. Seniors are being hired months before graduation. The lower living costs in agricultural campuses and the incentive of free (or minimal) tuition are also considered contributing factors. The reasons for the unexpected shifts in the total enrolment picture are not yet clear.

The Government for the first time has defined its stand on the expansion of higher education. The present level of enrolment is to be maintained while opportunities are increased for post-secondary technical training. The instrument for selection and streaming is the national college entrance examination instituted this year. About 325,000 candidates took the examination last week. Presidential Decree No. 146 requires the administration of a National College Entrance Examination (NCEE) in order "to maintain the highest quality of education in the country by regulating the admission of students from the secondary to the post-secondary institution of learning to promote national development and ultimately help maintain a healthy and viable balance of all types of workers in the manpower stock of the country."

A moratorium has been placed on the establishment of new universities and colleges while steps are being taken to consolidate the public institutions of higher learning. The plan envisions the establishment of a national system with the University of the Philippines as the core, serving as the model for undergraduate programmes and as the main centre of excellence for graduate study and research. Similar national systems are also envisioned for teacher training and technical education. Regional universities are to be established in the three principal regions of Luzon, Visayas and Mindanao with concentration on selected programme areas and professions. Two regional agricultural universities have been established for Luzon and Mindanao and a

third is contemplated for the Visayan region. It is expected that the [illegible] will [illegible] in relation to national development needs as well as cooperation in the use of resources and in the conduct of research and development projects. Moves for expansion in the future will be consolidated on these national and regional systems, thus avoiding proliferation of the number of institutions. The distribution of the 27 existing public institutions is shown in Table 1.

The most controversial accusation levelled against the existing system of higher education is that it has grossly failed to match outputs to market needs and to the manpower requirements of the national development effort. It is claimed that many graduates cannot find employment or are underemployed to an appreciable extent. One official prediction for the unemployment rate of graduates in 1974 is a very high 60%. The critics also say that the quality of the products is low measured in terms of relevance to specific job needs, and further, that the system inculcates undesirable attitudes towards manual and technical work. Technical and subprofessional slots reportedly remain unfilled in great numbers while college graduates go unemployed. Refuters of these criticisms present data and arguments just as logical and convincing as those given by the critics. The information available is not sufficient for settling the argument. The stock and flow of educated manpower still has to be studied adequately. The bases for existing studies have not been wide and broad enough to permit analyses and forecasts with sufficient consideration to waiting periods for jobs, to exchangeability of skills, to effects of technological innovations, to skills and knowledge required rather than to kinds of workers needed, etc. Both camps do agree that there is a need to provide more opportunities for post-secondary technician training. The government action in this direction was the establishment of three technical institutes, one for each region. As expected, the issue here centres on the choice between specialized occupational training for specific jobs and broad occupational education which prepares graduates for specialization and diversification of skills either on the job or through special short-term training programmes.

The government plan for the rationalization of higher education cannot overlook the reform of the private system for it must continue to rely on it to provide most of the programmes. As already noted, the system is vast and complex. Supervision is very minimal because the Department of Education and Culture does not have enough funds to support the elaborate machinery needed to monitor and regulate the activities of the system. Its small regulatory machinery actually serves mainly as a licensing authority.

TABLE I

DISTRIBUTION OF EXISTING PUBLIC INSTITUTIONS OF HIGHER LEARNING IN THE PHILIPPINES

Institutions of Higher Learning	Luzon	Visayas	Mindanao
Universities	3	1	2
Agricultural Colleges	3	1	1
Normal Colleges	2	3	2
Institutes/Colleges of Arts & Trades	6	1	1
Commercial Colleges	1	–	–
Total	15	6	6

Most of the institutions operate like public utility firms, offering consumer oriented instructional services for a fee. Research and extension activities are performed only at a few prestigious institutions. Institutional goals and programmes are decided individually, subject only to a small set of regulations of the Department of Education and Culture and to standards set by the Civil Service System and by professional examining boards. There are no common standards and there is no existing central machinery which can attend to this matter. There is very little interinstitutional cooperation. Proliferation and duplication are to be expected in such a system. The geography of the country and the way the system developed also contributed to the fragmentation.

The system was founded on the principle of free enterprise. It has prospered vigorously through the years, adjusting substance and form to the play of market forces. Accommodation, of course, led to some inevitable fragmentation and diffusion. In the main, it is certainly a unique and useful adaptive machinery which has met well major needs of the society which the Government could not satisfy. However, it can no longer continue to operate on these lines; to remain relevant, it must now articulate with the national development effort in partnership with the Government. Many events and developments in the past few years have pushed officials of many institutions off-balance with the result that there is now pronounced interest and inclination to work together more closely to undertake reform activities, particularly along voluntary accreditation and interinstitutional cooperation.

Significant reform is not possible without assistance for capital improvement and the development of faculty, facilities and services. All the private institutions are dependent on tuition fees. Private donations and income from auxiliary sources provide less than 5% of operating costs. The Government gives assistance only in the form of tax relief which yields very little revenue. A major increase of tuition fees is out of the question. A few of the non-stock and non-profit church-related and foundation-based institutions get grants from foreign assistance agencies but the latter cannot yet be considered an important source of aid. The Government recognizes that it must take steps to define and enforce standards and to provide assistance to reduce the dependence of private institutions on tuition fees, and in the case of proprietary schools, to remove or decrease the onus of producing returns on invested risk capital to pay dividends to investors. The concern of the Government is reflected by the fact that one of the earliest decrees (PD 6A) issued after the declaration of martial law in September 1972 provided policy guidelines for government assistance in various forms (subsidies for

selected programmes, student aid programmes, soft loans, etc.) to be tied to a scheme of accreditation. Implementation waits on the reorganization of the governing and administrative machineries of the national educational system.

The situation in higher education in the Philippines has been described with indications of the problems and the remedies being applied, following the guidelines suggested by the Director of the conference. Noted as improvement and development actions were institution of college entrance examinations, consolidation through the establishment of national and regional subsystems, creation of post-secondary technical training centres, incorporation of work-study programmes into the curriculum, and provision of scholarships for the poor and deprived. Steps are also being taken to control the brain drain, to evolve methods for the production of better instructional materials at lower costs, to broaden training programmes for administrators, and to provide financial assistance to schools pegged to a scheme of accreditation. The critical consideration is the systematic coordination of the efforts. It is recognized that success hinges on the implementation of the various steps in ways that will link them together into an organic whole.

The Government is most concerned with the reform of the educational system because it considers this change an essential ingredient for the success of its development effort. Special attention is being given to the examination of the contribution of higher education to socio-economic development and cultural renewal. The integrated rural development programme and the regional development strategy are aimed at generating job opportunities and increasing incomes through increased productivity, thereby stemming urban migration. The supporting programmes of agrarian reform, improved agricultural production, dispersal of industries and the promotion of labour-intensive small-scale service and processing industries are intended to produce significant shifts in employment patterns and the distribution of incomes. For the long haul, the two most important conditions for lasting success are effective population control and the successful reformation of the educational system.

Attention is now being given to the examination of the contribution of higher education to social development, economic progress, and cultural renewal in line with the search for ways through which the extensive resources of the educational system can be made to bear more effectively on the management of development projects of the Government. Systematic inquiry in this area should yield valuable insights and guidelines. This pressure on the system can grow with the years. It can become a force powerful enough to produce significant changes in the educational system. If it does, it will certainly bear heavily on the issue before us. (The speaker will discuss this

matter during the summation on the last day of the conference.)

It may be well to close this report on the Philippines educational system with a quotation from the latest book of President Marcos, "Notes on the New Society"

> "The most important field for the internal revolution is that of education and culture, of which there are numerous and grave problems problems of national identity, problems of reorientation and administration, of renewed vigour, fresh vision and the firmest resolution to carry through plans and programmes. Educational reforms will be the work of not one generation but of several generations working together."

PART III

PROBLEMS OF EXPANSION VERSUS CONSOLIDATION OF HIGHER EDUCATION IN SOUTHEAST ASIA

PROBLEMS OF EXPANSION VERSUS CONSOLIDATION OF HIGHER EDUCATION IN SOUTHEAST ASIA

Koesnadi Hardjasoemantri

PROBLEMS OF EXPANSION

The achievement of independence has created high hopes and great expectations. Demands for better educational, social and economic prospects have exploded as a logical reaction to the pre-independence era with all the colonial characteristics.

Many of the high hopes and expectations have turned out to be overoptimistic and quite a few remain unfulfilled. But changes have been profoundly felt in the field of general education and especially higher education.

Universities, having to fulfill the three prime objectives: teaching, research and service to the society, that is to say, to acquire knowledge, to preserve and transmit this knowledge and to promote the application of this knowledge to the service of society, are expected to promote the development and modernization of their various countries. The modern universities are becoming more and more engaged in socio-economic development. They are designed to be "development universities."

Manpower economists have stated convincingly that development problems are principally problems of "human resources" and that human resources are central to the process of development. Prof. Frederick H. Harbison of Princeton University, a leading authority on this subject, pointed out in his paper "A Human Resource Approach to the Development of the African Nations," prepared for the Overseas Liaison Committee, quoted by Dr. Alex A. Kwapong in his presentation on Higher Education in Ghana (Voice of America Forum Series)

> "In the final analysis the wealth and prosperity of nations depend upon the development and effective utilization of human resources. Capital and natural resources are passive factors of production; human beings are the active agents who accumulate capital, exploit natural resources, build social, economic and political organizations, and carry out national development. Clearly a country which is unable to develop skills and knowledge of its people and to employ them effectively in the modernization process will be unable to develop anything else."

PROBLEMS OF EXPANSION VERSUS CONSOLIDATION

In most of the countries in our region, the principal problems of human resources could be identified as follows:

1. The high rate of population growth;
2. The rising unemployment in the rapidly growing cities;
3. The shortage of critical and strategic skills in all sectors of the economy, not only in the skills of high-level manpower, but even more serious in the middle-level or subprofessional manpower, the skilled craftsmen and technicians;
4. The inadequacy of the formal educational system; and
5. The neglect of or insufficient provision for non-formal education.

The acute problems pose a very serious challenge to the universities, which are expected to contribute to the solutions to these problems, not only as a "think-tank," but also in the execution of operational development plans.

The awareness of the role of the universities in the active participation of solving these problems came at a later stage in the development of universities in Southeast Asia.

The expansion of higher education has had little or no direct relationship with the solution of the problems, due to the absence in the past of an integrated nationwide policy in the development of higher education, resulting in an uncontrolled growth.

The establishment of new universities has been generally based on the following considerations:

1. To provide access to higher education to more graduates of ever expanding high schools that could not be accomodated by the already existing universities;
2. To enable youngsters to pursue their studies at newly established universities in the region where they live so that they do not have to go to distant universities;
3. To build an image of prestige to certain areas/provinces/regions and groups within the society (political, religious, social, etc.) in having their own universities; and
4. To provide income/additional income to individuals/groups/organizations, thus using the universities as "commercial enterprises."

Quite a few of these new universities grew unplanned without much regard to academic standards and national needs.

Moreover, the system inherited from the colonial past has been continued with minor changes as a "patchwork" operation.

A more basic approach towards relevance of the system of higher education to the needs of the country was adopted only very recently. The relevance of the curricula, the teaching and the research programmes to national development needs becomes urgent; the numbers, types, calibres and quality of the graduate and postgraduate students must be reassessed in relation to national manpower requirements. Their contribution to the cultural and social development and integration of the country's needs must be re-emphasized.

As a result of the democratization of education, there is the assumption that each child, entering primary education, will ultimately become a student in the university. This assumption, coupled with a prestige status accorded to university graduates, leads towards a great influx into the university system. Financial constraints as well as the scarcity of qualified teaching personnel and insufficient teaching facilities are confronted with the rush of secondary school graduates entering the universities, resulting unavoidably in the deterioration of quality.

One tends to overlook the basic principle that universities are not merely institutions accepting secondary school graduates as an automatic continuation after leaving their schools, but they are institutions which have been given the assignment to provide highly skilled manpower for the development of the society and as such have to comply with certain minimum requirements. These requirements, in turn, demand certain academic qualifications which act as a selection mechanism for people entering universities. In other words, not every secondary school graduate could automatically be admitted, since academic qualifications are a necessary prerequisite.

Another problem faced is the lack of integration between higher education and secondary education. Many secondary school graduates do not have the educational standard as required by the universities, so that preliminary or matriculation classes have to be provided by the universities. This places an additional burden on the shoulders of the faculty members who are already overloaded with assignments.

The expansion of higher education also overlooks a very important problem, i.e. the linkage between input-output manpower need. The enrolment

at the universities, old and new, is not geared towards a functionalization of this linkage. There are no continuous surveys in this respect to provide clear implications for educational policy. These surveys need to assess both the total needs for post-secondary school skills, the balance between fully professional level skills (with perhaps distinctions between those professions in which there is little training on the job after graduation and those in which preprofessional training is a preparation for further professional training on the job), preprofessional level skills, and subprofessional skills, and the demand for such skills by regions or provinces.

There is evidence of shortage of skills particularly in professional/discipline specializations, and of present oversupply of manpower in others. This evidence also very often neglected in setting up new universities, so that there is no effort to redistribute the student enrolment, i.e. increasing or decreasing the enrolment in certain faculties, or to add certain specialized fields of study to existing faculties.

It is not my intention to give an expose of all the problems of expansion, which indeed are numerous, but the major problems mentioned above will suffice in demonstrating the ill-effects of expansion which is not based on a well-designed, nationwide plan of the development of higher education, as an integral part of the national development plan.

PROBLEMS OF CONSOLIDATION

Consolidation is an effort to increase the efficiency and effectiveness of the existing system. In the process of consolidation, quite often painful surgeries have to be performed. It might well be that certain institutions have to be closed because of their very poor academic conditions which make it very difficult for them to operate; otherwise they may be charged with "abusing" students and society. Psychological considerations could ease the pain, but the surgical operation still has to be carried out.

The dominant factors in the whole process of consolidation are planning and coordination.

The drive towards planning and coordination is essential because of the following reasons:

i. The phenomenal growth of higher education, where the enrolment has doubled, tripled and quite often also quadrupled leading to the inevitable physical expansion of institutions of higher education, while funds for this purpose are not sufficiently available;

2. The knowledge explosion, creating a different kind of strain on traditional institutions so that the growing and special needs for higher education can no longer be met in a uniform system;
3. The towering cost of academic enterprises, creating the need for reallocation of budget and for the identification of resources (government, business enterprises and the society at large);
4. The need for a functional linkage between input-output job opportunities, thus limiting the overproduction of graduates in certain fields and increasing the number of graduates in other fields, bearing in mind also the absorbing capacity of the economy; and
5. The rapid development, which has taken place in an unfavourable situation, especially in relation to budgetary constraints, and to the quantity and quality of teaching personnel and facilities available and which has not been supported by developing modern management systems and efficient innovative concepts and skills.

The main problem of consolidation lies in the establishment of a well-designed plan for the development of higher education, not merely in relation to plans for the individual institutions (usually referred to as master plans of universities) but also, and most important, in relation to nationwide plans.

In this respect, the question of coordination becomes the most crucial point. Coordination between whom? Universities and universities or universities and the government?

In the Southeast Asian region, the coordination is obviously between the universities and the government.

Plans which are designed only by government agencies without the participation of universities, will not reach the target. Neither will plans designed only by universities.

Coordination should be executed through various channels:

1. Periodical meetings between an inter-university cooperation body and the government; and
2. A joint-body involving university representatives and the government.

Scanning the horizon in this field, we could benefit from the experiences in other parts of the world.

There is in ***India*** a University Grants Commission, established in 1956 under an Act of Parliament. The University Grants Commission is an autonomous body, receiving its funds from the Central Government for the development of universities. The basic idea governing the working of the Commission is that development plans for education and formulation of policy are left to the "judgement of peers." It is a system which enables the universities to have an effective share in the formulation of major education policies and in the distribution of funds.

A National Council for Higher Education is being established in ***Ghana,*** which will coordinate policy in higher education, and as a University Grants Committee, mediate in negotiations concerning the financing of the higher education institutions with the Government, which is their main provider. This Council, together with the independent governing councils of universities, will help to safeguard the academic freedom of the universities while ensuring that they discharge their academic responsibilities in the national interest.

The University Grants Committee (UGC) in Great Britain, established in 1919, represents the interests of the universities in the Government, serving as a buffer between the dons and government.

In recent years the role of the UGC has become less unilateral. To help assure the universities of the funds they need, it now presses them to rationalize what they do. It is more active in telling the universities what in its view (and that of the Government) would best respond to national needs. It suggests which universities should teach subjects where limited student demand and expensive resources indicate consolidation. The UGC has also pressed the universities to analyse how teaching staff allocate their time so that the universities can better justify and even improve the utilization of their costly teaching resources. In short, the pressure of rising costs has gradually transformed the UGC from an instrument largely of one-way communication and a means of warding off government intervention into a two-way medium.

The members of the UGC, 20 in number, are appointed by the Secretary of State for Education and Science. Some of the members come from the industrial or commercial sectors or from non-university parts of the educational system, and a clear majority of them are practising university professors, representing all the main subject fields and, as far as possible, the main geographical areas of the country. They do not represent their particular universities. They are supported by a small but very highly qualified staff of administrators and specialists, like architects and quantity surveyors, who are recruited from the career civil service.

The whole operation of the UGC depends on reciprocal confidence between the three partners involved, the universities, the Government and the UGC itself.

In ***Latin America, Brazil*** has a Board of Higher Education, while ***Chile*** has a National Council of University Rectors which meets to establish national plans.

By the law of 1968, the National Council for Higher Education was created in ***France.*** The activities of this Council are indispensable in the life of new universities since it must advise the Minister of National Education, who is its president, in the following five areas: (1) planning of teaching and research; (2) establishment of university budgets; (3) definition of national degrees; (4) harmonization between the universities; and (5) the judgement in the event of conflict between the rectors and the universities.

The membership of the National Council is limited to 90, to ensure efficiency, consisting of full professors and other members of the teaching staff, students, research fellows, administrative personnel and private individuals. The law of 1968 makes it clear that the National Council gives advice to the Minister and as such is not a deliberative body.

Apart from this Council, the Minister has created a Conference of University Presidents so that every university can make its voice heard at the ministerial level. The Conference can present its projects and desires to the Minister while, on the other hand, the Minister can ask its views when he needs them.

The Science Council in ***West Germany*** consists of 39 members: 11 delegates from the 11 states (10 ministers of education and 1 minister of finance), 6 undersecretaries of state nominated by the Federal Government, 16 scientists nominated by the three greatest scientific organizations (the German Research Organization, the Max-Planck Society and the West German Rectors Conference) and appointed by the President of the Federal Republic; and 6 more personalities from public life, who are nominated jointly by the Federal Government and the State Governments for appointment by the President of the Federal Republic. The term of service of non-governmental members of the Council is three years. On the basis of the number of votes, the Science Council is divided into a Scholarly or Scientific Commission (22 members) and an Administrative Commission (17 members, but 22 votes).

Any recommendation given by the Science Council (it does not have

executive powers, but only makes recommendations) has to be passed by both Commissions in plenary sessions. At first, members of the Scientific Commission, very often together with representatives from the Administrative Commission and experts from various fields, work in small teams on particular problems. Then their proposals are thoroughly discussed, first by the Scientific Commission, afterwards by the Administrative Commission, and are finally presented to a plenary session for acceptance or refusal. A two-thirds majority vote is required on any subject.

The Science Council was set up in 1957 by an agreement between the Federal Government and the Governments of the 11 states. The following responsibilities were assigned to the Science Council: (1) to produce an overall plan for the promotion of the sciences (humanities as well as natural sciences); (2) to work out an annual programme of priorities to this end; and (3) to make recommendations for the use of funds allocated in the budgets of the Federal Government and of the states to support the promotion of the sciences.

So far, the assignment of producing an overall plan for the promotion of sciences and humanities proved too big to grasp in one attack. The Science Council, therefore, tried to divide the subject into three parts: in 1960 it passed recommendations for the expansion of the universities; in 1964 it made recommendations concerning scientific libraries; and in 1965 its recommendations dealt with research institutions outside the universities, academies of science, museums and scientific collections. All these recommendations were directed towards improving the personnel and material situation of the institutions in question.

Recommendations for the reform of studies in the universities (1966) and for the improvement of the administrative structure of the universities (1968) were supposed to serve as first steps for the necessary transformation of the German university of the nineteenth century into one of the last third of the twentieth century. A major step in this direction was taken by the Council's recommendations on the expansion and structure of German universities from May 1970 until 1980. This master plan for the development of the universities in the next decade serves as a basis for the educational programme of the Federal Government now in power. The master plan for the universities will be followed by a master plan for research in the Federal Republic of Germany covering not only research in the universities, but also in all other fields, including research in government institutes as well as in industry.

Participation of members of the West German Rectors Conference in subcommittees of the Science Council proved to be sufficient for achieving the

common goal: to improve the situation in and for the universities.

The West German Rectors Conference is gaining a greater understanding of itself more and more as a political institution, developing its own activities for the renewal of the higher education system.

A formal agreement has been reached between the Science Council and the West German Rectors Conference about better information from either organization; regular meetings will be held and broader participation of members of the West German Rectors Conference in subcommittees of the Science Council will take place.

These illustrations of coordination mechanisms serve as comparative material to promote the development of educational system and the management of this system at the national level.

In his concludatory remarks, entitled "The Future of Coordination," (Voice of American Forum Series) James A. Perkins noted a worldwide impulse, stated as follows:

> "All societies, whether modern or modernizing, are experiencing an increasing demand for access to higher education and, at the same time, an increasing requirement for trained citizens that only higher education can produce. This demand and this requirement have forced a steady expansion of colleges and universities around the world. They have also brought about growing diversity in institutions and programmes to meet the specialized needs of students and society. No longer can one institution, or even one type of institution such as the university, hope to provide the myriad specialities that now comprise post-secondary education. Today, the total requirements of higher education are met through a system of diverse institutions. Each of the system serves some special purpose or a particular geographic area, but collectively the system offers the full range of educational choice.
>
> In such an interconnected and interdependent system of institutions, the offerings of individual institutions can no longer be left to chance. Large-scale planning is necessary to coordinate the many parts of the system, and since this is obviously beyond the capacity of any single college or university, planning bodies have emerged as the newest feature on the academic landscape."

International cooperation requires exchange of experience to avoid repeating

mistakes and pay it again with precious time, scarce manpower and funds which we cannot afford.

THE INDONESIAN CASE

Expansion was the order of the day before 1965, especially after a decree was issued by the Provisional Peoples Consultative Assembly in 1963, in which it was mentioned that it would be appropriate to have in each province at least one state university. The "appropriateness" was interpreted later as "compulsory," resulting in heavy demands for the establishment of new state universities in provinces with no universities. Universities become attributes of provinces, like having a provincial legislative house, a provincial government, a provincial budget, and the like. Universities are regarded as status symbols, regardless of the intrinsical value, i.e. the academic standing of the institutions. Quite often they are only universities in name.

The Basic Memorandum on Higher Education, submitted for the first time in 1967, called for an overall review of the policy. It states strongly that no more expansion is to be allowed, and that the stress must be laid on quality, thus gearing the policy towards consolidation of the system.

Based on this Basic Memorandum, a national development plan has been set up, covering the following areas:

1. Reorganization of the structure and management;
2. Curriculum development;
3. Personnel development;
4. Material development; and
5. Research and public service development.

To understand fully the impact of the plan, an elaboration of the programmes in each area is given below.

Reorganization of the Structure and Management

As a follow-up of the Basic Memorandum, agencies of change have emerged in the field of higher education.

First of all, there are the so-called "pembina" faculties ("pembina" literally means "developer"), i.e. faculties which in view of their higher academic standing have been assigned by the Government the leadership role of upgrading other faculties in the same disciplines.

A further step is the grouping of these "pembina" faculties into five

"consortia," viz. the consortia for (1) agricultural sciences, (2) science and technology, (3) medical sciences, (4) social sciences and humanities, and (5) education and teacher training. The Consortium of Social Sciences and Humanities is subdivided into five subconsortia, viz. for law, economics, social sciences, arts and philosophy, and psychology.

These consortia are advisory boards of the Minister of Education and Culture in designing nationwide development programmes in their respective fields. In specific instances, the Minister could delegate to the consortia the authority to execute programmes. Advice is sought from the consortia in the fields of structural, curriculum, personnel, material, research and public service development.

Tangible results have already been achieved since the establishment of these consortia in January 1970. Review of structure and curriculum is in progress; upgrading courses ranging from agriculture to psychology have been undertaken by the "pembina" faculties under the coordination of the respective consortia, books are being translated from foreign languages into Bahasa Indonesia, etc. These activities will be continued in the years to come to achieve a real nationwide uplift of quality.

In all these efforts one must not lose sight of the fact that available human and material resources are scarce. Any plan, therefore, which envisages simultaneous development of all state institutions of higher education will be unrealistic and ineffective.

Selecting priorities, which has a number of advantages, is therefore inevitable. It tends to maximize the impact of both national and external resources by avoiding unnecessary duplication of efforts and dissipation of scarce resources which are inherent in a scheme of equal allocation of resources to all, irrespective of the quality of their performance and potentiality for growth.

This strategy is the outgrowth of the selective approach adopted in the First Five-Year Plan and is in accordance with the President's directive to adopt an intensive approach in consolidating development efforts and resources rather than fritter them away on extensive programmes.

Starting from 1971-72, five out of 40 state universities/institutes have been selected to be developed into "centres of excellence." The selection is based on the following criteria: (1) academic standing; (2) possibility of interdisciplinary studies and research; (3) potentiality for innovation and experimentation; (4) capacity to extend their excellence to other universities,

(5) prospects of better and quicker returns from investment of limited resources, and (6) sphere of influence in terms of students, teachers and academic disciplines.

The five universities/institutes selected to be developed into centres of excellence are the following:

1. Universitas Indonesia (UI), i.e. University of Indonesia in Jakarta;
2. Universitas Gajah Mada (UGM), i.e. Gajah Mada University in Yogyakarta;
3. Universitas Airlangga (UNAIR), i.e. Airlangga University in Surabaya;
4. Institut Teknologi Bandung (ITB), i.e. Bandung Institute of Technology in Bandung; and
5. Institut Pertanian Bogor (IPB), i.e. Bogor Institute of Agricultural Sciences in Bogor.

Compared with other faculties in the country, the "pembina" faculties in the five centres, which account for 80% of the total "pembina" faculties, have better staff, students, equipment and facilities, and have therefore better programmes of teaching, research and public service. Hence the time and resources required to bring these centres up to the higher standards will be much less than those required to build up entirely new or less developed centres.

The selection of five centres for concentration of local and external resources does not mean that they will be the only beneficiaries. On the contrary, this role of "pembina" faculties and the institution of the consortia of "pembina" faculties ensures that benefits will readily be multiplied and extended to all other universities.

While the consortia act as advisory boards to the Minister on Academic Affairs, another body has been set up, namely, the Advisory Council on Higher Education (Dewan Pertimbangan Pendidikan Tinggi) for the purpose of advising the Minister on General Policy Matters, such as the review of the Higher Education Act, the regulations regarding the use of degrees, the systematic groupings of disciplines, the regrouping of institutions of higher education, system of funding, etc. This Advisory Council has as its members rectors of selected state as well as private universities, the chairmen of consortia and representatives of ministries having close links with higher education. The chairman of this Advisory Council is the Director-General of Education who is an ex-officio member, while the Director of Higher Education acts as secretary of the Council in a non-member capacity.

Recognizing the important role played by the private universities in

carrying out higher education, a special body is established for the purpose of providing guidance in the development of private universities. This body, called the Institute for Private Institutions of Higher Education (Lembaga Perguruan Tinggi Swasta), has as its members rectors of selected private and state universities, the chairmen of consortia and representatives of certian government agencies.

The membership of the Advisory Council on Higher Education and the Institute for Private Institutions of Higher Education have the same categories, the difference being in the fields of activity, i.e. the Advisory Council for general policy matters, while the Institute deals exclusively with matters relating to private universities.

There are also annual meetings of the rectors of state universities as a forum for dialogues between the Ministry of Education and Culture and the rectors concerned. These meetings are also utilized to discuss the draft annual budget for the next fiscal year.

The annual meetings of the rectors are also used to monitor the implementation of policies, as well as to sound out the feelings of the rectors regarding the various suggestions from the advisory bodies. The three advisory bodies and the annual meetings of the rectors of state universities provide mechanisms for better planning and coordination, leading towards the process of consolidation.

As mentioned earlier, no further expansion is allowed. On the contrary, efforts have been undertaken to regroup the university system through various actions, such as integration and merger.

The first effort in this respect was done in 1967 when branches of Institutes of Teacher Training and Education, located in other cities away from the mother institutes, were integrated into local universities. Through this process, which took place after one whole year of persuading and convincing the parties concerned, branches of various IKIPs scatered over the whole archipelago, have been integrated into local universities.

Table I gives an account of the process of this integration.

A further effort starting in 1968 has been the gradual phasing-out of the branches of universities situated in locations outside the university town, resulting in the centralization of faculties on one campus rather than scattered in several towns.

TABLE I

INTEGRATION INTO LOCAL UNIVERSITIES

Former Mother Institute	Location of Branch	Integrated Into
1. IKIP Jakarta	Pakanbaru	University of Riau
2. IKIP Jakarta	Ambon	Pattimura University
3. IKIP Jakarta	Jayapura	Cenderawasih University
4. IKIP Jakarta	Tanjungkarang	University of Lampung
5. IKIP Bandung	Banda Aceh	Syiah Kuala University
6. IKIP Bandung	Palembang	Sriwijaya University
7. IKIP Bandung	Pontianak	Tanjungpura University
8. IKIP Bandung	Palangkaraya	University of Palangkaraya
9. IKIP Bandung	Banjarmasin	Lambung Mangkurat University
10. IKIP Malang	Jember	University of Jember
11. IKIP Malang	Singaraja	Udayana University
12. IKIP Malang	Kupang	Nusacendana University

Table II shows which branches have been phased out.

The system of phasing out is implemented through this procedure. Starting in a certain year, the institute concerned does not accept new first year students, while the students who are already in the institute can either finish their studies or move to the mother institutes. In adopting this procedure, a gradual [illegible] is made possible without creating too many difficulties for the students who are already in the institute.

In 1970, we started integrating institutions of higher education under the jurisdiction of other ministries into state universities, which are under the Ministry of Education and Culture. This is an effort to limit degree-granting institutions only to universities. For example, the Academy of Public Works and Energy, which was managed by the Ministry of Public Works and Energy, has been integrated into the Bandung Institute of Technology as a polytechnic institute.

These efforts towards consolidation will be carried out further to ensure efficiency and effectiveness of the whole system.

Another significant improvement is the effort towards designing master plans for individual institutions. The exercise of university planning by each state university was instigated by the Directorate of Higher Education to ensure a more efficient and effective operation, based on short and long term programmes. Earmarked funds for the exercise were allocated to each university in 1972. A team has been set up, drawn from the Bandung Institute of Technology and the Gajah Mada University, to assist the universities in drawing up their respective draft master plans.

By the end of October 1973, every one of the 40 state universities and institutes submitted their draft master plans to the Ministry of Education and Culture to be studied further and ultimately approved. As the master plans of the universities are a part of the whole educational plan, which in turn is a part of the whole development plan, the review of these master plans of the universities will also involve the various agencies in the Central Government, including the National Planning Board and the various ministries.

The master plan of the university covers all aspects of the university life: [illegible] research and service to society, with all the physical and non-physical [illegible]. The [illegible] team for assistance has issued a general guidance for the [illegible] of the master plan, including the identification of constraints,

TABLE II

CENTRALIZATION IN ONE CAMPUS

Location of Branch	Centralized into the Campus of
1. IKIP Branch in Tegal	IKIP Semarang in Semarang
2. IKIP Branch in Madiun	IKIP Malang in Malang
3. University Branch in Magelang	Gajah Mada University in Yogyakarta
4. University Branch in Tasikmalaya	Pajajaran University in Bandung
5. University Branch in Biak	Cenderawasih University in Abetura

Curriculum Development

The existing system, with a five year study for almost all the professional studies at the various faculties, has been adopted from the previous pre-independence period with some changes made in the course of time.

Efforts are now being made to change the system with the view to make the curricula more relevant to the needs of development as well as to the progress of science. The needs of development cover also the ecological setting in which the university finds itself.

A terminal programme, equivalent to the bachelor's programme, is now being carried out as a pilot project by the Bandung Institute of Technology in the field of technology, by the Bogor Institute of Agriculture and the Agriculture Faculty of the Gajah Mada University in the field of agricultural sciences, by the Faculty of Letters, University of Indonesia in the fields of arts and letters, while the Yogyakarta Institute for Teacher Training and Education prepares a pilot project in the field of teacher training.

As for the other faculties, the system remains the same except that for the purpose of uniformity as far as the core curriculum is concerned, ministerial decrees have been and will be issued on minimum curricula for faculties in the same disciplines. Faculties are free to provide courses on top of the core courses as determined by the minimum curricula. These minimum curricula are designed by the respective consortia.

Another new concept (at least for the higher education system in Indonesia) is now seriously being taken into consideration, i.e. the "open-door" system of higher education. This system provides not only the degree programme, as is the case until the present time, but also non-degree programme, covering diploma courses to obtain certain skills and certificate-courses for certain subjects.

This system tries to answer the following questions:

1. Due to the minimum requirements for entering the degree programme of higher education, quite a few graduates of secondary education could not pursue further studies, while at the same time they are not suitably prepared to be productive in the community as a result of the too theoretical nature of the existing secondary education. The "open-door" system with its non degree programmes could provide a solution here.

2. The system as it now stands provides only two alternatives: (a) to graduate at the end of study, or (b) to drop out because of academic incompetence. The "open-door" system offers another alternative for dropouts through switching to non degree programmes, thus still having the opportunity to acquire certain skills.
3. Members of the society at large, who would like to obtain more knowledge at the post-secondary level, face only one option, i.e. to enrol as full-time students, which is not their intention. The "open-door" system with its non-degree programmes provides a series of courses, which they could attend at their own choice. This opens a wide opportunity for officials, government as well as private organizations, to increase their skill and knowledge for the improvement of the execution of their responsibilities.

An intensive study on the real needs for certain skills and knowledge felt by the community must be conducted by each university in its own locality: otherwise the non-degree programmes become unattractive and thus not effective.

Another attempt to relate the system of higher education to the needs of development is the introduction of the "study-service scheme" in which the students are given the assignment, as a curricular requirement, to work in the rural areas in interdisciplinary units for a period of three to six months.

An observation made by Andrew Quarmby and Diana Fussel on this study-service scheme will enlighten those who are interested in programmes involving students in community development.

Personnel Development

The most strategic factor in the qualitative aspect of developing educational institutions, is the development of teaching personnel. It has been given a high priority in the policy implementation.

The personnel development is carried out through three systems:

1. The "seeding" system, by means of which senior students are selected, and prepared to become faculty members. It is called the "seeding" system, since senior students are still regarded as "seeds."
2. The "grafting" system which includes a mechanism for selecting new graduates and "graft" them to "pembina" faculties to gain strength and ability in the field of teaching and research, and later to be assigned to other faculties.

3. The "upgrading" system, which provides refresher courses for existing faculty members executed by the "pembina" faculties primarily for faculty members of "pembinaan" faculties.

The consortia assist the Ministry in the implementation of the personnel development plan on a nationwide scale. They are able to execute this task, since they know exactly the manpower situation at the various faculties in their fields of study, based on the results of their observations on the spot.

An illustration of the implementation of upgrading programmes is given in Table III.

Upgrading programmes are also conducted abroad, covering degree as well as non-degree programmes, as could be seen from Table IV.

The personnel development, as mentioned above, is closely related to the teaching staff. The personnel development covers also programmes for development of university administrators, librarians and laboratory technicians. The programme of developing university administrators is now being carried out with the assistance of UNESCO. Scholarships have been provided by various governments and agencies to enable university librarians to gain more knowledge and to improve their ability in the management of libraries as a vital component in the functioning of the universities.

Upgrading courses for laboratory technicians have been conducted by the Bandung Institute of Technology and the Gajah Mada University to assist other universities in providing their technicians with the technical ability in the maintenance and repair of their equipment.

These upgrading courses are annual programmes with earmarked funds made available to the upgrading centres on an annual basis.

Material Development

In this context, an effort towards the standardization of equipment in laboratories as well as required literature is now under way. This endeavour is executed by the respective consortia and has a double purpose:

1. To maintain a certain level of standard, applied to all the faculties, and
2. To make efficient and effective use of the available funds, i.e. to purchase the required equipment and literature first, rather than buying sophisticated or specialized items which bear no direct relationship with the basic requirements.

TABLE III
DOMESTIC UPGRADING PROGRAMMES
PERIOD 1970/1973

Centres of Upgrading	Agricultural Sciences		Science & Technology		Medical Sciences		Social Sciences and Humanities										Education and Teacher Training		Total	
							Law		Economics		Social Sciences		Arts and Philosophy		Psychology					
	Number of courses	Number of participants	Number of courses	Number of participants	Number of courses	Number of participants	Number of courses	Number of participants	Number of courses	Number of participants	Number of courses	Number of participants	Number of courses	Number of participants	Number of courses	Number of participants	Number of courses	Number of participants	Number of courses	Number of participants
1. University of Indonesia	–	–	–	–	2	20	3	48	5	72	2	61	8	122	5	62	–	–	25	385
2. Bogor Institute of Agricultural Sciences	3	136	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	136
3. Bandung Institute of Technology	–	–	10	139	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	139
4. Pajajaran University	–	–	–	–	–	–	3	25	–	–	–	–	–	–	–	–	–	–	3	25
5. Gajah Mada University	6	75	6	67	2	10	3	44	4	55	1	14	3	50	–	–	–	–	25	315
6. Airlangga University	–	–	–	–	2	16	3	25	–	–	–	–	–	–	–	–	–	–	5	41
7. Hasanuddin University	–	–	–	–	–	–	–	–	3	18	–	–	–	–	–	–	–	–	3	18
8. IKIP Jakarta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	36	3	36
9. IKIP Bandung	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	113	4	113
10. IKIP Yogyakarta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	101	10	101
11. IKIP Malang	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	66	5	66
Total	9	211	16	206	6	46	12	142	12	145	3	75	11	172	5	62	22	316	96	1373

TABLE IV
UPGRADING PROGRAMME ABROAD
PERIOD 1970 – 1973

Fields of Study	YEAR								TOTAL	
	1970		1971		1972		1973*			
	Degree Programme	Non-Degree Programme	Degree Programme	Non-Degree Programme	Degree Programme	Non-Degree Programme	Degree Programme	Non-Degree Programme	Degree Programme	Non-Degree Programme
1. Agricultural Sciences	28	11	36	2	51	20	20	4	135	37
2. Science and Technology	46	5	34	28	57	16	15	4	152	53
3. Medical Sciences	37	47	55	31	95	47	35	16	222	141
4. a. Law	2	1	5	7	8	6	1	4	16	18
b. Economics	15	17	11	1	24	17	8	7	58	42
c. Social Sciences	19	7	19	17	33	9	3	18	74	51
d. Arts and Philosophy	8	11	31	2	45	15	15	1	99	29
e. Psychology	4	–	6	1	11	8	–	–	21	9
5. Education and Teacher Training	17	5	46	20	97	13	35	5	195	43
6. (Others)	2	2	4	22	26	7	6	55	38	96
Total	178	106	247	131	447	158	138	114	1,010	509
Grand Total	284		378		605		252		1,519	

*January – June 1973

Attention has also been given to a book development programme, which [illegible] translations [illegible] and original writings in the national language, [illegible] the medium of instruction throughout the school [illegible] primary education up to higher education.

This [illegible] more urgent because of the inability of students to understand English [illegible], due to the inefficient teaching of [illegible] secondary schools.

[illegible] given to books for first and second year students, who [illegible] the largest part of the student body and whose ability in English [illegible] inadequate.

[illegible] in this area, the consortia are requested to coordinate [illegible] translations and editors, as well as to [illegible] original writings are recommended.

[illegible] of the book programme.

Research and [illegible] Development

[illegible] research institutions par excellence in [illegible] universities [illegible] as the only research [illegible] development. This situation occurs many [illegible].

[illegible] and solved is how strong and able the [illegible] research. The question could be related to [illegible] systems, [illegible] and of [illegible].

[illegible] problem, which has to be solved not [illegible] *ad hoc* [illegible] through a well designed programme.

[illegible] through an integrated [illegible] in the [illegible] 1972. Interdisciplinary [illegible] consisting [illegible] university who are drawn from different [illegible] research course at the Bogor Institute of [illegible]. The course [illegible] the basis of research methodology, [illegible] field research in their respective provinces [illegible] at the Lambung Mangkurat University [illegible].

TABLE V

Book-Programme

1970 – 1973

Area of Study	Year [illegible]	Original Articles
1. [illegible]	[illegible]	[illegible]
2. [illegible]	[illegible]	1
3. Medical Sciences	4	[illegible]
4. Social Sciences & Humanities		
a. Law	4	
b. [illegible]	1	[illegible]
c. Social Sciences	[illegible]	
d. Arts and [illegible]	4	2
e. Psychology	4	
5. Education and Teacher Training	5	[illegible]
Total	49	7

This programme proved to be quite effective and is continued in this fiscal year.

Universities, which have been given the opportunity to join in the programme of last year, are Lambung Mangkurat University at Banjarmasin, Hasanuddin University at Ujung Pandang, Pattimura University in Ambon, Sam Ratulangi University in Manado, Udayana University in Denpasar, Brawijaya University in Malang and Jenderal Sudirman University in Purwokerto.

Funds for research and public service are derived from various sources. Table VI shows the number of research and public service projects, which are financed through allocations by the Ministry of Education and Culture during the years 1970 — 1973.

The selection of research fields by the respective universities is based on a guidance provided by the Central Government, i.e. the Minister for the Coordination of Research for the purpose of maximum benefit for the national development. Assistance is also provided by the various consortia in the selection of these projects.

Apart from projects financed through the Ministry of Education and Culture, there are also research projects required by other ministries or by private organizations on contract with universities or university people.

Problems arise if these contracts are made with individuals, rather than through their respective universities. Classes are neglected because the individual faculty member is doing research in another locality in his capacity as a contractor to an outside organization.

A serious effort is now being undertaken to remedy this kind of a situation, among others, through institutionalization, which means that every contract must be signed with the Rector of the university.

On funding of research and public service projects, I would like to refer to a statement by Robert E. McGarrah, Professor of Management at the University of Massachusetts, in his article "The University Updated" (The Journal of Higher Education, Volume XLIV, Number 2, February 1973).

> "The university would charge fees for most services. Revenues would cover, not only direct costs of services, but also indirect [illegible] activities on campus more or less directly related to the work of the institute. Some might ask why

TABLE VI

RESEARCH AND PUBLIC SERVICE PROJECTS
PERIOD: 1970–1973

Fields of Study	Number of Projects
1. Agricultural Sciences	355
2. Science and Technology	210
3. Medical Sciences	122
4. Social Sciences and Humanities	216
5. Education and Teacher Training	270
6. Indonesia's National Study-Service Scheme	16
Total	1,199

such services should not be rendered without charge, in keeping with traditions of "free" agricultural extension services of tax-supported universities. (But these services were intended as free for farmers, not for agri-business firms). If service were performed without fee, then privately financed research and consulting firms would be justified in complaints about unfair, subsidized competition. In charging fees to organizations fully able and willing to pay, and in conducting its service projects as integral parts of its higher education programme for student interns, the university can ameliorate or avoid such complaints. By its growth in earnings and services of its community services institute, the university should be able to stimulate even greater financial contributions (grants, gifts, appropriations) made traditionally for philanthropic reasons by alumni, taxpayers, friends, government, industry or foundations. Thus, the university can develop itself simultaneously in three ways its experiential education projects, its contributions to intellectual needs of organizations, and its revenues earned and granted."

CONCLUSION

The greater the expansion without nationwide planning and coordination, the more chaotic and out of control the situation will become, while at stake is the future of generations of young people. The Indonesian mistake before 1965 must serve as a lesson and a caution for expansionistic endeavours, while consolidation efforts in the post-1965 period be regarded as comparative material to solve problems in other countries in our region, for we cannot afford the luxury to repeat mistakes.

PART IV

MASS VERSUS SELECTIVE HIGHER EDUCATION IN SOUTHEAST ASIA

MASS VERSUS SELECTIVE HIGHER EDUCATION IN SOUTHEAST ASIA – THE RESPONSES OF THE UNIVERSITY OF SINGAPORE

Lim Chong Yah

BACKGROUND

The University of Singapore is one of the six institutions of higher learning in Singapore. The other five tertiary institutions are the Nanyang University, the Singapore Polytechnic, the Ngee Ann Technical College, the Singapore Technical Institute and the Institute of Education. Their 1972 student enrolments were as follows.

Singapore Polytechnic	5,764
University of Singapore	5,226
Nanyang University	2,513
Ngee Ann Technical College	1,216
Singapore Technical Institute[1]	616
Institute of Education	547
	15,882

In other words, the University of Singapore, which forms the subject of this study, is responsible for producing about one-third of the total higher-level manpower of the country, which has an estimated population of 2.2 million.

Although the University of Singapore was legally constituted only in 1962, its antecedents – King Edward VII College of Medicine and the Raffles College – had a history that dated back to 1905 and 1929 respectively. After the Second World War, these two Colleges were amalgamated to form the University of Malaya (also situated in Singapore) in 1949, and by 1957, the University established a branch in Kuala Lumpur. This branch later developed into the present University of Malaya (situated in Kuala Lumpur) and the original University of Malaya (situated in Singapore) was renamed

[1] The Singapore Technical Institute was established quite recently (1969) as a post-industrial technical institute. For student enrolment statistics of each of the other four tertiary institutions from 1962 to 1972, see Ministry of Education, Singapore, Education in Singapore, (Singapore: Education Publications Bureau, 2nd edition, 1972), Table 12A, pp. 94-95. This document also contains a wealth of other factual information on various aspects of education, including higher education, in Singapore.

the University of Singapore, Chief Justice Suffian of Malaysia, among other things, Pro-Chancellor of the University of Malaya, thus said in a slightly light-hearted manner in his Convocation Address in Singapore on being conferred the Honorary Degree of Doctor of Law by the University of Singapore in 1972 that, "This is the only instance known to me of a parent changing his name and giving his name to his offspring."

Politically, Singapore evolved from being part of the prewar British Straits Settlements to that of a postwar separate British Colony and then to a self-governing State in 1959; in 1963 she joined the newly constituted independent Federation of Malaysia, and on 9 August, 1965, she was separated from the Malaysian Federation to become the independent Republic of Singapore. Economically, Singapore underwent the rapid metamorphosis of being an essentially entrepot economy in the colonial period to an entrepot-manufacturing economy, with the growth of international banking and international tourism added to its new economic framework. Since the independence of Singapore in 1965, particularly after 1967, the economy has witnessed an unprecedented upward surge, with a cumulative annual GNP growth rate of about 14 per cent per annum. The labour market has become increasingly tight, with an increasing shortage of skilled and semi-skilled labour, in contradistinction to the serious chronic unemployment and underemployment situation of the 1950s and the greater part of the 1960s.[1] These two crucial interrelated factors -- political independence and economic transformation -- have had their important impact on the character, the ethos and the direction of the University, including its staff recruitment policy, its curriculum development, its various functions in the community and its student enrolment mix, especially after Dr. Toh Chin Chye, the Minister of Science and Technology, and former Reader in Physiology of the University, became its Vice-Chancellor in April 1968.

CURRICULUM DEVELOPMENT

The new Vice-Chancellor, who has also been Chairman of the Board of Governors of the Singapore Polytechnic since 1959, added in 1969 three new Faculties to the University. The three new Faculties were the Faculty of Engineering, the Faculty of Architecture and Building and the School of Accountancy and Business Administration. These changes were effected through

[1] For more information on the recent performance of the Singapore economy, particularly in the 1960s, see Lim Chong Yah and Ow Chwee Huay, "The Economic Development of Singapore in the 'Sixties and Beyond" in Yoo Poh Seng and Lim Chong Yah (eds.), The Singapore Economy, (Singapore: Eastern Universities Press, 1971) pp. 1-42. See also Lim Chong Yah et. al., Economic Structure and Organization, (Singapore: Oxford University Press, 1973), Ch. II, pp. 25-48.

the transfer of the professional streams of the Singapore Polytechnic Schools of Engineering, Architecture and Building to the University. The Polytechnic School of Accountancy was similarly transferred to the University to amalgamate with the relatively new University's Department of Business Administration.[1] The Vice-Chancellor also amalgamated the much older Faculty of Arts with the much newer Faculty of Social Sciences to form the new Faculty of Arts and Social Sciences.

Besides the two Postgraduate Schools in Medical Studies and Dental Studies, there are thus today seven Faculties and two other Schools in the University, with a total of 44 Departments (see Table I), contrasting with the position when the University was first formed in 1949, with only three Faculties, namely, the Faculty of Medicine, the Faculty of Arts and the Faculty of Science.

The two Postgraduate Schools in Medical Studies and Dental Studies, particularly the latter, are of recent origin. The School of Postgraduate Medical Studies provides postgraduate training leading to the award of the degrees of Master of Medicine in Internal Medicine, Paediatrics, Surgery, and Obstetrics and Gynaecology, besides the Diploma in Public Health. The School of Postgraduate Dental Studies provides postgraduate training in dentistry leading to the award of the degree of Master of Dental Surgery. The existence of the two separate and distinctive postgraduate schools in the University does not mean that the other faculties and schools do not award higher degrees. Indeed, they all do. And the coordinating and decision-making organ is the recently established Board of Postgraduate Studies, consisting of all the Deans and Directors (other than from Medicine and Dentistry) and the Director of the Institute of Education with the Vice-Chancellor as its Chairman. In July 1973 a total of 233 candidates were reading for higher degrees and postgraduate diplomas in the University.

Simultaneous with the integration of the Faculty of Arts with the Faculty of Social Sciences into the new Faculty of Arts and Social Sciences, the opportunity was also taken by the University to alter the degree structure by making all undergraduates in the Faculty take three subjects in the first three years for a B.A. degree, before being selected to read for the one-year

[1] For all intents and purposes, there are no significant differences between a Faculty and a School in the University, and for convenience of exposition, the word 'Faculty' is thus used to cover 'School,' where necessary, throughout this paper. The major, and perhaps only important difference is that the Head of a Faculty is called Dean and is elected by the Faculty members, whereas the Head of a School is called Director and is appointed by the Vice-Chancellor.

TABLE I

FACULTIES AND SCHOOLS, UNIVERSITY OF SINGAPORE (1973)

Faculties/Schools	Departments of Study
1. Medicine	14
2. Arts and Social Sciences	11
3. Science	5
4. Engineering	4
5. Architecture and Building	3
6. Dentistry	3
7. Accountancy and Business Administration	2
8. Law	1
9. Pharmacy	1
Total	44

Note Some Departments straddle two or more Faculties, and to avoid double counting, they are classified under their Faculties proper.

Honours degree in the subject of specialization in the fourth year. Previous to this, following the practice in British universities, undergraduates needed only to do three years, specializing in one or two subjects from the first year onwards without sitting for a bar examination in the second year, to obtain an Honours degree in Arts or in the Social Sciences. Under the new degree structure, there is a bar examination at the end of each year, and generally speaking, undergraduates have to select at least one subject from the lists of Arts or Social Sciences subjects out of the three subjects to be taken. Measures have also constantly been taken to upgrade and update the syllabus not only in the Faculty of Arts and Social Sciences but also in the other Faculties and Schools. Some results of this constant review in the Faculty of Arts and Social Sciences, for example, are the making of Statistics as a separate subject in the Faculty, the addition of Music as a separate discipline also within the Faculty, the incorporation of English linguistics in the curriculum of the Department of English which has been changed to the Department of English Language and Literature with a view to giving some emphasis and orientation towards the language aspects of the Department's function. Indeed, it would be too long and too onerous to catalogue the changes in the curriculum and syllabus in the last quinquennium or so of the Faculty of Arts and Social Sciences alone. Suffice it therefore to say that the changes just mentioned are intended to serve only as an illustration of the sort of changes that have taken place in all the Faculties and Schools in the University. One key factor taken into account in this Faculty to Faculty and Department to Department review is the relative importance and relevance of the curriculum and the syllabus to the needs of the modern society, especially to the needs of Singapore and the position of her people in the South and Southeast Asian and East Asian regions and in the world community.[1]

Three more cross-faculty integrative changes introduced in the last quinquennium or so, however, should be mentioned. One is the requirement of all Arts and Social Sciences students to follow a specially designed course in the natural sciences provided for by the Faculty of Science for the first two years of their study. The other is the requirement of undergraduates in the Faculty of Science to select one of the six specially designed courses

[1] [illegible] curriculum so that our graduates [illegible] will help them [illegible] capacity and stability [illegible] and technology [illegible] by itself is [illegible] university education more relevant [illegible] come in to study [illegible] political [illegible] 1968 Convocation [illegible] Mass [illegible]

offered by the Faculty of Arts and Social Sciences in the second and third year of study. The third group, consisting of students from the Faculty of Engineering, the Faculty of Science and the School of Accountancy and Business Administration, who cannot satisfy the Department of English Language and Literature in their proficiency in oral and written English will have to attend a specially designed course for each Faculty in the English Language in the first year of their study. Those already proficient are required to follow a [illegible] course in the humanities also provided for by the Faculty of Arts and Social Sciences. No longer have departments been allowed to [illegible] themselves in each faculty as a larger island [illegible], but are closely integrated as truly integral parts of the larger University structure, whilst retaining the identities of the various integral parts.

SELECTION CRITERIA

The minimum qualification for entry into the University is two principal passes at the Higher School Certificate examination or its equivalent, and the University is open to all language stream students in Singapore, though the majority of students seeking entry into the University are from the English medium stream who form the majority of the Singapore H.S.C. student population. Each Faculty and each Department may have also its published stipulated qualifications in certain subjects for entry into the particular Faculty or Department. For entry into the Faculty of Medicine and the Faculty of Dentistry, for example, the candidate must possess a pass in the General Paper and three principal H.S.C. passes in acceptable subjects, such as biology, chemistry and physics.[1]

If the University accepts each year all the applicants who have the necessary minimum academic qualifications for entry, the University will be overflowing with students. If the University, for instance, accepts all the 5,748 new applicants for entry to the first year for the current academic session, the number of students would have exceeded the present enrolment of 5,20[illegible] which includes the new intake of 1,760 students for the year. If the University accepts all the 416 applicants to study medicine as the first choice for the current session, the number of first year students would constitute 72.1 per cent of the present total enrolment of 577 students in the Faculty. Indeed, should the University pursue this "meet the wishes of the applicants" policy, mechanically, the influx of applicants would be immensely multiplied, as a result of the diversion of those who would otherwise have applied for

[1] Details on the minimum entry qualifications into the University and into each Faculty and Department are published in a university pamphlet entitled University of Singapore: Instructions to Candidates Applying for Admission.

places in the other institutions of higher learning and those seeking employment joining the University instead.

In order to take in only the number of students that each Faculty is able to cope with without in any way adversely affecting the standards or quality of education, each Faculty has set up a higher entry criteria based on a common point system for the whole University. The Faculty entry point is not rigidly fixed for all years, but is subject to some variation, inevitably, however, varying upwards, depending on the staffing position, the number and qualifications of the applicants, the facilities available, and also of particular importance, the employment prospect of each discipline.

As can be seen from Table II, about 30.8 per cent of those who applied secure places in the University, and that this percentage marks a decline from a higher percentage of about 40.3 per cent in 1968. Comparison on a Faculty basis can be misleading, as many Faculties have rejected their "first choice" candidates because of lower level H.S.C. performance in favour of "second choice" or even other lower choice candidates who have performed better at the H.S.C. examinations. But the Faculty statistics based on "first choice" candidates only and their respective enrolment figures also show the declining ratios for all Faculties over the period 1969 to 1973. Also of interest is that because of the increasingly large number of applications and the improvement in the quality of the H.S.C. performance, the cut off points for all the Faculties have also gone up with time, particularly for non Singaporean students.

The University entry selection based on H.S.C. examinations is the first of the selection processes for the eventual award of the degree. The other selection is based on the need to pass the examination at the end of each year but the elimination process is much stricter at the end of the first year than in other years. Because of the high standards of actual university entry and the intensive coaching system made possible because of a favourable student/staff ratio, the wastage rate has been quite low, particularly in years other than the first year. The University has also published provisions for the Dean of each Faculty to have the discretion to bar students from sitting for an examination, if he is satisfied that he has not been attending the course or courses to the Dean's satisfaction. A favourable student/staff ratio plus the essay writing tutorial system has made it possible for staff members to note the attendance of students without having to take attendance. From time to time a few students have been barred from sitting for the examination by their Dean.

The Vice-Chancellor has from time to time in welcoming new undergraduates, reminded them in a humorous vein not to overstay their

TABLE II

APPLICATIONS AND FIRST YEAR STUDENT ENROLMENT UNIVERSITY OF SINGAPORE, 1968/69 – 1973/74

Year	Total Number Applied (A)	Total Number Enrolled (B)	Per cent of (B) over (A)
1968/69	2,688	1,083	40.3
1969/70	3,152	1,190	37.8
1970/71	3,357	1,291	38.5
1971/72	4,100	1,272	31.0
1972/73	4,990	1,617	32.4
1973/74	5,723	1,760	30.8

Source Deputy Registrar's Office, University of Singapore

welcome. Each Faculty has a maximum number of years in which a student is allowed to study and, therefore, also in the University, as the University does not permit transfer of students, particularly failed students, from one Faculty to another. In the Faculty of Arts and Social Sciences and in the Faculty of Science, for instance, the maximum period of study for a three-year course for B.A. or B.Sc. is five years. In the Honours year in both the Faculties, only one attempt is permitted. The selection to the fourth year Honours course has been very strict, and the criteria are firstly academic merits and, secondly, the staffing position of the Department and the employment prospect of the discipline concerned.

Just as the University is very strict in selecting its undergraduates and its Honours students, so is the University equally strict in selecting higher degree students. Graduates of the University are encouraged to go out to work and to serve the society and community that has so heavily subsidized their education. The University thus takes pride in the fact that not only is there no unemployment of its graduates, but that most of its higher degree candidates are already fully employed and are pursuing their higher degrees in disciplines that are directly relevant to the upgrading of their skills in their chosen occupations or professions. One criterion for the selection of higher degree candidates therefore is the importance or relevance of their research topics.

Graduates too are not permitted to pursue another undergraduate course of study in another Faculty. The University's preference is given to those who have not had the benefit of a highly subsidized university education, normally well-qualified new H.S.C. school leavers.

ENROLMENT MIX[1]

The student enrolment composition of the University has also undergone a revolutionary change since Dr. Toh Chin Chye assumed the office of the Vice-Chancellor of the University in April 1968. He not only added three new Faculties to the University's curriculum, as mentioned earlier, but he also ensured the very rapid expansion of the three new Faculties. To avoid duplication and to facilitate administration, the rather small but important School of Education was transferred to the Teachers' Training College lately reconstituted as the Institute of Education.

[1] The [illegible] do not include students [illegible]

As can be seen from Table III, the three oldest Faculties in the session 1968/69 together had as many as 81.3 per cent of the students, with the Faculty of Arts and Social Sciences topping the list with 34.2 per cent of the total student population. But just five years later in 1973/74, the total corresponding percentage of student enrolment for the three Faculties dropped from 81.3 per cent to 40.6 per cent.

Indeed, through a deliberate student intake policy of the University's Senate Admission Committee, consisting of all the Deans and Directors of Schools under the chairmanship of the Vice-Chancellor, as rapidly as in session 1971/72, just two years after the establishment of the Faculty of Engineering and the School of Accountancy and Business Administration in the University, student enrolment in the Faculty of Engineering (793) had exceeded that of the combined Faculty of Arts and Social Sciences (734), with the School of Accountancy and Business Administration taking the third position with 674 students, exceeding the enrolment in the Faculty of Science (629) and the Faculty of Medicine (583). See Appendix I for changes in student enrolment by Faculties and Schools since 1958/59.

In the current 1973/74 session, in terms of size of student enrolment the three largest Faculties have continued to take the pattern set in 1971/72 with Engineering leading (21.2 per cent), followed by Arts and Social Sciences (19.0 per cent) and Accountancy and Business Administration (18.8 per cent). But for the fact that Accountancy is a three-year course, coupled with the better staffing position in the Faculty of Arts and Social Sciences there can be little doubt the School of Accountancy and Business Administration would have a student enrolment exceeding that of the old Faculty of Arts and Social Sciences.

Indeed, as Table IV shows, all the old Faculties show a decline in student enrolment, with the new and the relatively new Faculties showing spectacular expansion.[1]

In the Faculty of Arts and Social Sciences, which has the second largest number of departments (12)[2] in any Faculty or School of the University, the enrolment mix too has undergone a great change as a deliberate policy on the

[1] The Faculty of Law was established in November 1959 and is therefore not such a new Faculty, but it is new relative to the disciplines handed down from Raffles College and Medical College days.

[2] Includes Mathematics, which in Table I is classified under the Faculty of Science.

TABLE III

CHANGING ENROLMENT MIX OF FIRST THREE LARGEST FACULTIES, UNIVERSITY OF SINGAPORE SESSIONS 1969/70 AND 1973/74

Faculties/Schools	Session	
	1968/69	1973/74
Arts & Social Sciences	34.2	19.0
Science	28.3	10.5
Medicine	18.8	11.1
Total	81.3	40.6

Faculties/Schools	Session	
	1969/70	1973/74
Engineering	8.8	21.2
Arts & Social Sciences	24.6	19.0
Accountancy & Business Administration	12.0	18.8
Total	45.4	59.0

Source Appendix 1

TABLE IV

PERCENTAGE CHANGES IN STUDENT ENROLMENT BY FACULTY UNIVERSITY OF SINGAPORE SESSIONS 1969/70 TO 1973/74

Faculties Schools	Percentage Changes 1973/74 Over 1969/70
Law	+ 37.7
Engineering	+200.0
Business Administration	+110.0
Accountancy	+ 84.7
Architecture	+108.5
Building and Estate Management	+352.9
Arts and Social Sciences	– 3.9
Science	–42.1
Medicine	– 5.1
Dentistry	9.4
Pharmacy	–25.7
(University Total)	(+25.0)

Source: Appendix 1

part of the University to reduce the number of students reading political science, philosophy and sociology, as can be seen from the statistics in Table V.

Why has the University deliberately brought about the enormous change in the enrolment mix? The answer lies almost entirely on the determination of the Vice-Chancellor to adjust the supply of high-level manpower to the demand of the changing socio-economic structure of Singapore. In other words, there has been the determination not only to restructure, to update and to upgrade the university curriculum but also to bring about the change in the student enrolment mix so as to enable the University to make its maximum contribution to the needs and development of Singapore. In the words of its Vice-Chancellor,

> "The universities ... should be regarded as expensive investments for manpower that will serve Singapore's society .... It certainly does not make sense to appease the demand for more university education if the end result is to create social unrest through graduate unemployment, and ironically, in spending more millions of dollars on higher education, the University is not only reduced to a state of morass but also held responsible for adding to the economic and social problems of the country. It is not the quantity of higher education but the nature, type and quality of education that we need to bring our minds to bear on. The universities and colleges of many developing countries are swollen with numbers but these countries continue to remain at the bottom of the World Bank league."[1]

According to Dr. Malcolm Adiseshiah, Director of the Madras Institute of Development Studies, in a recent paper presented to the 45th Congress of the Australian and New Zealand Association for the Advancement of Science (ANZAAS) held at Perth, the number of university graduates seeking employment and registered with employment exchanges in India alone rose from 917,000 in 1966 to 2.6 million last year and then stood at 3.2 million, which included "many thousands who had obtained Ph.D. degrees." According to him Asian countries like India, Indonesia, Pakistan, Bangladesh and Sri Lanka would have to speed up the implementation of restructuring their educational systems which at present were "turning out unemployables at all levels."

[1] August 1972 Convocation Address by the Vice-Chancellor (Dr. Toh Chin Chye). For the relative position and progress of Singapore in the world economy, see Lim Chong Yah, "Singapore's Position in the World Economy," Review of Southeast Asian Studies, Vol. 1, No. 4, 1971, pp. 1-9.

TABLE V
FACULTY OF ARTS AND SOCIAL SCIENCES
FIRST YEAR STUDENT ENROLMENT
SESSIONS 1969/70 AND 1972/73

Subject	Year	
	1969/70	1972/73
Increases		
Chinese Studies	10	22
Economics	191	211
English	86	100
Geography	66	68
History	70	103
History and Politics	N.A.	42
Malay Studies	7	60
Statistics	N.A.	41
Pure Mathematics	7	16
Decreases		
Philosophy	149	75
Political Science	115	53
Sociology	172	115
Total	873	906

Source and Note: Compiled from the Office of the Dean of Arts and Social Sciences. In year one, each student is required to take three subjects in the Faculty. The total number of students in the Faculty has thus to be divided by three to get the actual number of students. N.A. here means not applicable.

STUDENT/STAFF RATIOS

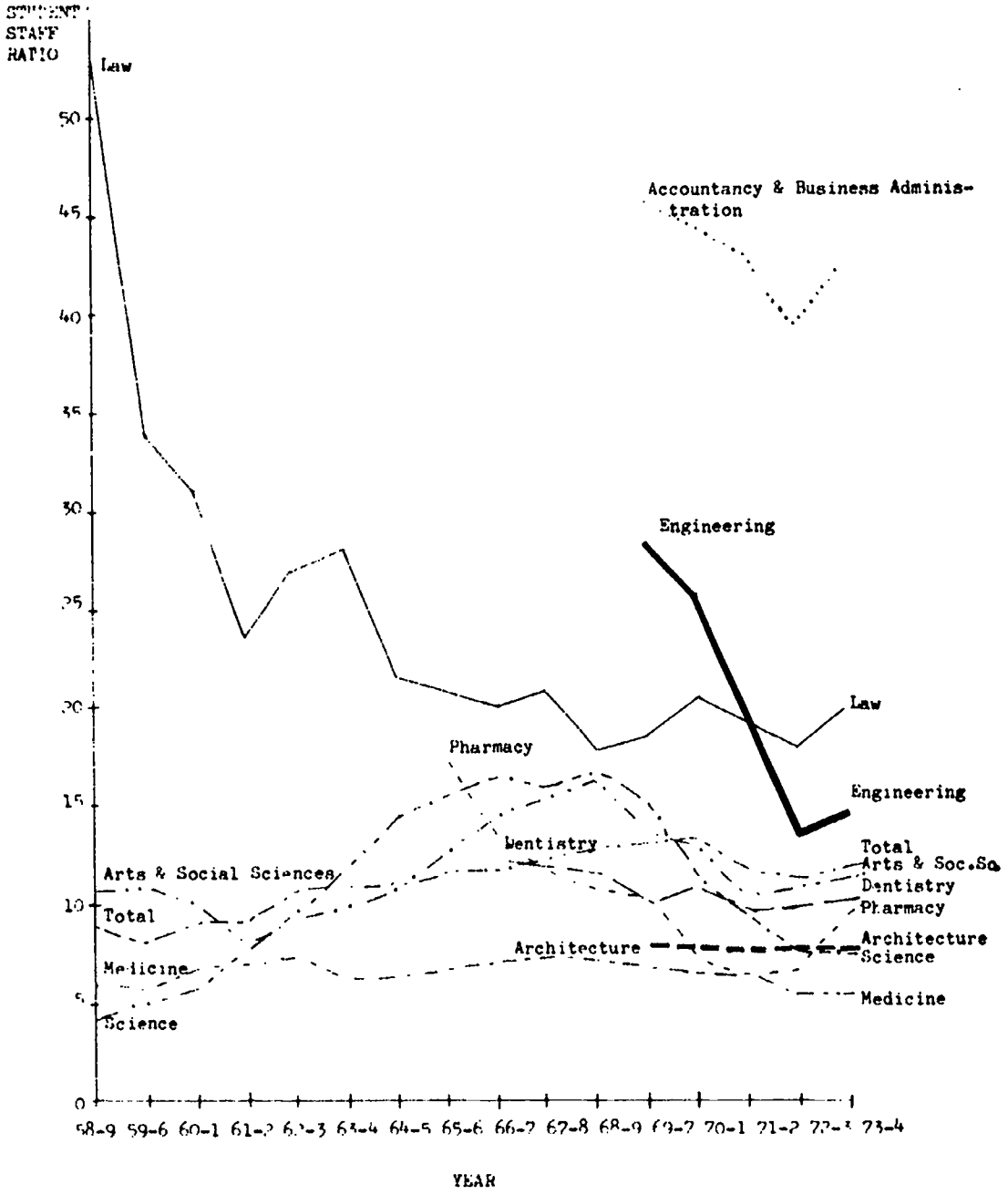
One measure of the staffing position in relation to student enrolment of an educational institution is the student/staff ratio. ***Certeris paribus,*** the position is more favourable with a smaller ratio, or conversely, less favourable with a bigger ratio. For the last, say, ten years, between sessions 1963/64 and 1973/74, the University as a whole has been able to maintain a more or less constant student/staff ratio, varying roughly between 11 : 1 to 13 : 1, despite an increase in full-time student enrolment from 2,195 in the session 1963/64 to 5,203 in the session 1973/74, a simple average increase of 13.7 per cent per annum. As can be seen from the statistics in Appendix II, only in two years (1969/70 and 1970/71) did the ratio reach 13 : 1, and obviously these ratios were raised because of the very high ratios in the newly created Faculty of Engineering and the School of Accountancy and Business Administration.

Taking student/staff ratio as a yardstick, one interesting characteristic that becomes obvious from a cursory examination of the graph on the next page and of the statistics in Appendix II is that all the old Faculties have much lower student/staff ratios than the new Faculties except Architecture. In the current session, the five old Faculties, except the Faculty of Arts and Social Sciences, all have a student/staff ratio of below 10 : 1 with the Faculty of Medicine having the lowest ratio of 5.2 : 1 and the Faculty of Science a ratio of 7.4 : 1. The Faculty of Arts and Social Sciences has the highest ratio among the five old Faculties with, however, a comparatively internationally very low ratio of 11.1 : 1.

Of the four new Faculties, except for Architecture, the other three Faculties, particularly the School of Accountancy and Business Administration, all have a relatively high ratio. The School of Accountancy and Business Administration has still as high a ratio as 42.4 : 1 and the Faculty of Law that of 19.8 : 1. But if we compare the student/staff position between 1969/70 and 1973/74, there has been a marked improvement in the position of nearly all faculties, particularly the Faculty of Engineering.[1]

Despite various limitations, the usefulness of a comparative student/staff ratio study is there. The temporal comparison indicates where the University and its various component Faculties are moving in terms of staffing. The inter-faculty comparison may also be useful in the formulation of the general priorities in staff recruitment policy, if not also in identifying the relative teaching capacities of various Faculties. It may, however, be erroneous to conclude that the teaching load of the staff member is ***pari passu*** lower with a lower student/staff ratio even within the same University or within the same Faculty, for the method and intensity of teaching and the range of subdisciplines

STUDENT/STAFF RATIOS BY FACULTY, 1958/59 – 1973/74
UNIVERSITY OF SINGAPORE



Note Ratios do not include part-time teachers and inter Faculty courses.
See footnote on page 133

offered may differ. Again, although student/staff ratio measures the quantitative change in either the numerator or the denominator or both, it does not measure the qualitative changes in both the variables. It is thus important to add that both factors have improved in quality, particularly after 1968. In the case of staff members, this is reflected by the demand for better and higher entry qualifications as well as the demand for better and higher attainments for promotion. In the past, a person with a Master's degree, for example, could become a Lecturer in the Faculty of Arts or Social Sciences, but the present minimum academic requirement is normally a doctorate degree from a reputable university.

COMMUNITY SERVICE

Teaching is the most important function of the University: it is the ***raison d'etre*** for its existence. Through teaching the University contributes to the supply of the high-level manpower needs of the country. The research function of the University, however, is also important, for without it, the University becomes anaemic and impotent. Without research and publication, no new knowledge is added. The students, it is well said, will drink only from a stagnant pool, and not from a running stream.

A good condition not conducive to research and publication efforts is excessive teaching responsibilities. Owing to the favourable student/staff ratio, this adverse condition does not prevail at the University of Singapore. The emphasis on research and publication in the University is sufficiently great, as is reflected in the policy of using publications as one of the criteria for merit salary increments and promotion. Since 1968 the University has each year published a separate booklet showing the research and academic publication efforts of the staff, and for the year 1971 the booklet shows an impressive list of 456 published titles.

[1] The ratios used exclude part time staff who came to a total of 320 for the session 1973/74, according to the University of Singapore 1973/74 General Information pamphlet, and are distributed as follows

Architecture and Building	30
Arts and Social Sciences	41
Dentistry	13
Engineering	8
Law	21
Medicine	174
Science	2
Accountancy and Business Administration	24
Pharmacy	1
Language Centre	6
Total	320

The ratios too do not take into account courses offered by one Faculty to another. Seven full courses, for example, are offered by the Faculty of Arts and Social Sciences to the School of Accountancy and Business Administration.

But also closely linked up with the quality of teaching and research is the consultation and public service of a large number of the University's staff members. Consultation work for private bodies is encouraged by the University, if it is tied up with the area of specialization of the staff and if it can be shown beyond doubt that the staff member's normal university responsibilities will not in any way be adversely affected. Staff members are permitted to retain as much as 60 per cent of their annual salary in the form of consultation fees. 'Moonlighting' in the sense of doing a job not connected with the staff member's area of specialization is not permitted, and at any rate, all consultation work has to be approved by the University and the amount of consultation fee received has to be paid through the Bursar of the University to the staff member concerned.

The links of the University with the community are not just through the graduates of various disciplines it turns out each year, through its research and publication efforts, and through the consultation services its staff members undertake, but also through two main areas in which the University has also distinguished itself. One is in the provision of numerous specially designed courses for those who wish to update their knowledge in areas related to their jobs through the University's non-faculty Extra-Mural Studies Department. No examinations are conducted by the Department, but certificates of attendance are given, and courses are conducted only if there is a demand for them. In 1972, for example, 168 courses covering a wide range of subjects, such as, to name but a few, 'Child Care,' 'Musical Form and Analysis,' 'Professional Practice on Building Bye-laws,' 'Timber Identification,' 'Hydromechanics of Ship Design' and 'How to Start a Small Business' were run. The number of participants who had to pay fees in that year totalled 7,229, making the Bukit Timah campus a real beehive of scholarship and learning even at night, as these special courses are conducted in the evenings.

The second other area is in the services of individual staff members to the public sector of Singapore, and here two types of public service can be roughly distinguished. One is purely or essentially professional in character, such as serving on statutory boards and advisory bodies that are closely linked up with the professional expertise of the staff members. The other is mainly political such as serving as Members of Parliament and Ambassadors. The University also publishes each year a list of its staff members contributing their services to the public sector of the country and the list is a very impressive one indeed.

The emphasis of the University in community service is explained in the 1969 Convocation Address by the Vice-Chancellor as follows:

> "Like grafted tissues or transplanted organs universities live or die depending on whether they have a kinship with their social and cultural development .... Today we can justly take satisfaction by the thought that members of the University are not only teachers or students but are also active participants in Singapore's defence forces, diplomatic service, statutory bodies, community centres and other civic organizations, and through their researches are contributing towards Singapore's economic and social development. We seek to expand this public service role for only by doing so can we justify the faith and confidence of the public in the University's capacity for playing a positive role in shaping the destiny and future of the Republic."

Two years later in the 1971 Convocation Address the Vice-Chancellor spoke thus

> "Members of the University staff are also acting as consultants to public organizations and private bodies on a diverse range of problems which include the flow of water in our reservoirs, the utilization of wood waste, the growing of coral on Pulau Sentosa, studies on high rise schools on behalf of the Ceylon Government, the writing of textbooks more suitable for our schools."

In the 1972 Convocation Address, satisfied with the changed role which the University has played, the Vice-Chancellor said thus.

> "It has taken us several painful years to divest from ourselves the image of a little island within an island."

Suffice it to add that, in the final analysis, the quantity and quality of public service, like research and publication efforts, will suffer if the University has had an unrestricted expansion resulting in the downgrading in the quality of its academic staff, its salaries, and its morale. Partly because of the emphasis on quality and partly because the University is the oldest university in the Malaysian-Singapore region, some academic staff have also had the privilege of helping other universities in Commonwealth countries in Asia by serving as general External Examiners or as External Examiners for specific higher degrees, and some others serve as consultants to various international bodies outside Singapore.

SOME TASKS AHEAD

The full impact of the new policy of Dr. Toh Chin Chye, paying, among other things, particular attention to qualitative improvement and regulated

development in tune with the varied needs of a rapidly industrializing society and independent nation in Southeast Asia, will not be felt until many years later.[1] Meanwhile, the addition of the three important Faculties has made the University spread over four separate campuses — Prince Edward Road for the Faculty of Engineering, Lady Hill for the Faculty of Architecture and Building, Sepoy Lines for the Faculties of Medicine, Dentistry and Pharmacy and the particularly overcrowded Bukit Timah campus for the Faculties of Law, Science, Arts and Social Sciences, the School of Accountancy and Business Administration and also the headquarters of the University Administration. Added to the problems of physical separateness and overcrowding at the Bukit Timah campus is that about one-third of the Bukit Timah campus is still submerged in water during a heavy thunderstorm. The expansion of student enrolment and corresponding staff increases has added to the urgent need to house the University in a single more congenial home, where at least the various advantages of close locational proximity of Faculties and between Faculties and Administration can be enjoyed. The Government has thus decided to move the University in stages to a 473-acre new site at Kent Ridge, vacated by the British as a part of its military withdrawal from Singapore. By 1975 the Faculties of Engineering, Science, Architecture and Building and the School of Accountancy and Business Administration are planned to be operational at Kent Ridge, with the other Faculties to follow in stages in later years. The moving of the four separate campuses to Kent Ridge will thus form one of the most important tasks for the University in the near foreseeable future.

The second main task is the continuance of the upgrading, improvement and modernization process for important areas such as teaching, curriculum development and expansion, research and publication, public service, sabbatical leave, staff recruitment, prevention of inbreeding, more widespread staff and student participation in the corporate life of the University and general administration. As this modernization and improvement process has already started, it is most unlikely that the momentum will not be retained, but this acceleration to modernity and to greater heights of achievement is by no means without its great difficulties, as the Vice-Chancellor himself hinted publicly, "Every university has its own inertia and the older it is, the greater is its own resistance to change."[2] He added, "The administrative structure and constitution of universities are too cumbersome for quick decisions and inhibit innovations

[1] As a Chinese proverb, when loosely translated into English, says, "It takes a much longer time for a man to be educated to full maturity than for a tree to be nurtured to full height." (十年樹木，百年樹人).

[2] July 1970 Convocation Address.

or response to changing demands as social and economic conditions outside the University change."[1]

The third main task lies in the establishment of more graduate schools in areas of particular importance to Singapore and the Southeast Asian region, and in which the University of Singapore, for various reasons, has definite comparative advantages. But this direction cannot be taken at the expense of undergraduate professional training (such as in Medicine, Engineering, Law and Accountancy) or non-professional training (such as in Arts and Social Sciences). Nor can it be taken without due regard to not just the employability of its graduates, but also to the economic and social cost-benefit of the investment of scarce resources. Except for very special fields, priority of growth in this direction in the near future seems not as urgent even for a well-established university, like the University of Singapore.

The fourth task lies in the greater coordination of activities not only amongst the various institutions of higher learning in Singapore, particularly between Nanyang University and the University of Singapore, but also with those responsible for the policy and general administration of pre-university institutions with the view to further improve on the quality and effectiveness of higher education in the Republic. Some consultation and coordination among such bodies has already been effected but more can perhaps be done for mutual benefit, remembering that many of these institutions, such as the University of Singapore and Nanyang University, have a history of independent, uncoordinated growth, permitted and perhaps permissible in the colonial era of the past, but which can hardly be perpetuated in a well-organized, achievement-oriented, modern society, such as post-independent Singapore.

To round off, perhaps a Chinese proverb on the difficulties of altering what Mother Nature has endowed, and relevant thus to the educational selection process, but against the democratic concept of the equality of opportunity of man, would suffice. The free translation of the proverb runs thus, "It is easier to change mountains and rivers than to change the nature of man." (江山易改，本性難移)。 We are not all endowed with the same gifts.

[1] August 1972 Convocation Address.

APPENDIX I

UNIVERSITY OF SINGAPORE

FULL-TIME STUDENT ENROLMENT BY FACULTY

SESSIONS 1958/59 TO 1973/74

Faculty/School	1958/59	1959/60	1960/61	1961/62	1962/63	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74
Law	106	103	191	254	323	391	340	350	279	268	301	316	327	342	389	435
Science	155	198	211	275	354	461	583	678	737	865	974	941	774	629	553	545
Medicine	419	457	512	542	563	571	618	633	657	637	645	608	582	583	576	577
Dentistry	89	97	109	126	135	167	181	185	194	189	184	170	161	150	168	154
Pharmacy	12	27	52	82	102	101	119	139	129	105	95	101	56	54	70	75
Arts	620	528	382	336	399	466	564	684	744	755	802	–	–	–	–	–
Social Sciences	–	–	–	–	–	–	–	–	62	208	374	–	–	–	–	–
Arts & Social Sciences	–	–	–	–	–	–	–	–	(806)	(963)	(1176)	1,027	904	734	909	987
Education	53	72	70	43	52	38	13	29	26	40	62	–	–	–	–	–
Engineering	100*	–	–	–	–	–	–	–	–	–	–	368	643	793	928	1,104
Business Administration	–	–	–	–	–	–	–	–	–	–	–	201	242	274	396	422
Accountancy	–	–	–	–	–	–	–	–	–	–	–	300	377	410	466	554
Architecture	–	–	–	–	–	–	–	–	–	–	–	94	124	143	174	196
Building & Estate Management	–	–	–	–	–	–	–	–	–	–	–	34	107	109	146	154
	1,554	1,482	1,527	1,658	1,928	2,195	2,418	2,698	2,828	3,067	3,437	4,160	4,297	4,221	4,775	5,203

Source: University of Malaya Annual Report 1958-59 to 1960-61
University of Singapore Annual Report 1961-62 to 1973-74

Note: Figures exclude those reading for master's and doctorate degrees
* Students were in Kuala Lumpur

APPENDIX II

STUDENT/STAFF RATIOS BY FACULTY, 1958/59 – 1973/74
UNIVERSITY OF SINGAPORE

Year	University Total	OLD FACULTIES					NEW FACULTIES			
		Medicine	Dentistry	Pharmacy	Arts & Social Sciences	Science	Law	Architecture	Engineering	Accountancy and Business Administration
1958-59	8.9	6.0	–	–	11.0	4.0	53.0	–	–	–
1959-60	8.3	5.6	–	–	11.0	5.0	34.3	–	–	–
1960-61	9.3	6.7	–	–	10.0	5.7	34.0	–	–	–
1961-62	9.3	7.0	–	–	8.0	7.2	23.1	–	–	–
1962-63	11.0	7.2	–	–	9.3	9.3	27.0	–	–	–
1963-64	11.1	6.5	–	–	10.0	11.5	28.0	–	–	–
1964-65	11.0	6.1	–	–	11.0	14.2	21.2	–	–	–
1965-66	12.0	7.0	–	17.3	12.0	15.4	20.5	–	–	–
1966-67	12.0	7.0	12.1	13.2	14.3	16.0	20.0	–	–	–
1967-68	12.3	7.2	12.0	13.2	15.2	16.0	21.0	–	–	–
1968-69	13.0	7.0	11.5	10.5	16.1	17.0	18.0	–	–	–
1969-70	13.0	7.0	10.0	10.1	13.5	15.0	18.5	8.0	28.3	45.4
1970-71	13.1	6.3	10.0	7.0	13.0	12.0	20.4	8.0	26.0	44.2
1971-72	12.0	6.2	9.3	6.0	10.3	9.3	19.0	7.5	20.0	43.0
1972-73	11.0	5.3	9.3	7.0	10.5	7.3	18.0	7.2	13.4	39.1
1973-74	12.0	5.2	10.0	9.3	11.1	7.3	20.0	8.0	15.0	42.4

Source and Note: Derived from statistics compiled in the Deputy Registrar's Office and in the Personnel Office, University of Singapore. Students and staff referred to are full-time members only. The statistics under Dentistry and Pharmacy were classified under Medicine for earlier years. The ratios exclude inter-Faculty courses.

"RAMKHAMHAENG: THE OPEN-DOOR UNIVERSITY REEXAMINED"

Amara Raksasataya

In 1969 there was a very vocal public demand for more space in the institutions of higher learning in Thailand. This writer joined in the fray by wrting an article suggesting that an open admission university be created.[1] The article attracted attention of some Thai educators and members of the House of Representatives of the Parliament. It has in a way contributed to the passage of a legislation which authorized the creation of Ramkhamhaeng University in February of 1971. Prior to the passage of the law, the author also wrote another article urging that Ramkhamhaeng University be ready for admission in time for the 1971 academic year commencing in June. It also suggested in detail how to build physical facilities as well as personnel recruitment plan.[2] Though the author has in no way participated in the legislative process to enact the law, except some consultation with a few members of Parliament, or in the actual preparation for its establishment and operation, the author has always viewed this University with great affinity. It is, therefore, a pleasure to once again spend some time reflecting about this great institution.

In the first article, the author envisioned that a university with enough room for 40,000 students based on an open admission policy be established. Initially, it should have concentrated on the social sciences and humanities with an active test bureau since it was supposed to rely on objective type of examination. He also offered suggestions concerning teaching methods, and staffing policies. In the second article, the detailed plans concerning administrators, students, physical as well as educational facilities, and staff welfare were elaborated upon with the view of expediting the pace of preparation to make it operational by June 1971.

They made it on 2 August, 1971. However, this author was not informed by any responsible persons whether the two articles have any effect on the

[1] "Mahawidyalai Bap Talad Wicha," Journal of the National Education Council (November 1969), pp. 19-38. Later it was translated and abbreviated for publication as "An Open University" in U.S. Department of Health, Education and Welfare, Education in Thailand (Washington, D.C.: Government Printing Office, 1973), pp. 106-116.

[2] "Mahawidyalai Ramkhamhaeng Nai Pee Karnsuksa 2514?" Journal of the National Education Council (October 1970), pp. 17-37.

process that allowed the University to open its classes on that date, though a lot of things have occurred along the suggested patterns. Let us review some of the initial developments leading to the opening of this new institution.

It is necessary to note that the creation of an open university was a popular demand articulated by a group of members of the House of Representatives which finally presented the "Bill for an Open University" to the Parliament. The Executive Branch in the beginning was lukewarm to the idea. It did not make any significant move until late October 1970 when the Bill was assured of passage by the Parliament. On 3 November, 1970 the Cabinet appointed the Committee on Preparations for the Establishment of Ramkhamhaeng University under the chairmanship of Dr. Sakdi Pasuknirant. The Committee moved forward rapidly to secure some funds and facilities to publish textbooks, to plan for a central library, and to recruit administrators and faculty members. General rules, regulations, curricula, admission and registration policies were made and necessary procedures were drawn up. Procurement for educational materials including audio-visual equipment, such as closed-circuit television network and textbooks, was carried out.

In fact all top administrative officers, i.e. rector, deans, and registrar were all appointed almost entirely from the Committee on Preparations soon after the passage of the law, thereby making it possible for them to move fast to implement their plans. Middle-level management and lower echelon personnel as well as instructors were recruited. Textbooks were prepared in anticipation of large demand from the part-time or out-of-town students so that most of them were ready on the first day of instruction or soon after.[1]

At this juncture we arrive at the starting point of the University's life. As this article is aiming at reexamining the performance of the University as it is entering its third year, we should, therefore, turn our attention to some critical aspects of its livelihood, namely, the goals, the organizational setup, the staff, the teaching facilities, and the students.

I. The Goals and Their Implementation

The enabling Act. Article 5, states specifically that "A university be established called Ramkhamhaeng University." It will be the academic and research institution of an "open market" model. Its objectives are to provide

[1]Most of the information concerning the preparation for this University is taken from Dr. Banphot Virasai, "Ramkhamhaeng University: A Case in Institution Building," Newsletter. Volume IV, No. 3 (December 1972), The Association of Southeast Asian Institutions of Higher Learning, Bangkok, pp. 43-55.

higher academic and professional education, to do research in order to promote higher academic and professional interests, and to promote cultural activities.[1]

To the non-Thais, the phrase an "open market" model may not be readily understood. To the Thais, it is an educational philosophy prevalent since 1933 when the University of Moral and Political Science was established by the People's Party Government which overthrew the absolute monarchy regime in the previous year. At that time, Thailand had only one university, Chulalongkorn, which was a small college with the capacity to admit only a few hundred students a year. Therefore, it had very stringent admission examinations which left many would-be students disappointed. The Government thought that the only arts and sciences college was totally inadequate in terms of producing well-educated people to serve in the Government. Besides, the new Government thought that it would be politically desirable to have a lot of people educated under the sponsorship of the democratic government to counterweight the more aristocratic tradition of the old college. It thought that a new university devoted to teaching in areas of law, political science, and other social sciences based on an open-door philosophy — that is, to admit anybody who had a high school diploma or its equivalent (which was interpreted very liberally) — would at once satisfy the general public and help build up a large body of political cadres who would soon become public servants in a much expanding bureaucracy. The UMPS flourished until 1950 when it was renamed Thammasat University. Prior to that, it was under close scrutiny of Marshal Phibul's and later Marshal Sarit's regimes for its highly politicized activities alleged to be sympathetic to the previous civilian regimes. There had also been a growing suspicion that the reason for the UMPS students' inferior quality to those of Chulalongkorn was because of its free admission policy. Therefore, by the late 1950s Thammasat University was switched to a closed admission model. Greater population growth and still inadequate facilities for higher education made the admission to Thammasat University almost as tough as at the other universities. Many people who could afford it sent their children abroad for further education. Thousands more, however, could not do so. Therefore, there was much talk to revive the UMPS model. This was achieved, not accidentally, when a new House of Representatives was elected in 1969 after a decade of military rule. The open-door or open-market route to higher education was therefore reinstituted.

To return to our original point of interest, one must be reminded that Ramkhamhaeng is only two years old. As far as the University is concerned,

[1] Ramkhamhaeng University Act B.E. 2514 (1971 A.D.) Royal Gazette, Volume 88, No. 24 (2 March, 1971).

it is merely infantile and therefore cannot be expected to be able to go into serious research and cultural activities as of yet. In fact, the University was only assured of its permanent site less than six months ago. It is still very short of everything save one – that is, students who number more than 40,000. The University is thus very busy taking them in and then trying to give them as much decent education as it can.

As for its primary objective, that of an open university, it has done a marvellous job indeed. In the first semester, starting May 1971, over 37,000 people applied and were admitted. This is much more than the estimate of the Committee on Preparations who expected to see about 15,000 applicants.[1] The fact that the new University could process large number of applications, and subsequently, provide for teaching and examinations in an orderly fashion is truely a wonder. Credits must go to the university administration as a whole. Suffice it to say that this infant institution has achieved its basic goal.

II. Organizational Structure

Though Article 6 of the Act stipulates that the University may consist of several faculties, a graduate school, and institutes or centres for research as necessary, the law has also written down in a provisional clause that "initially the University must be organized into:

1. Office of the Rector;
2. Faculty of Law;
3. Faculty of Business Administration;
4. Faculty of Humanities;
5. Faculty of Education; and
6. Office of Technical Services and Evaluative Testing.

Abolition of any unit written in the first paragraph must be done by an act."

It should be noted here that the Members of Parliament became suspicious that the Committee on Preparations or the Executive Branch at that time did not wish to create the Testing Bureau to test the students' achievements scientifically by objective methods. They were said to prefer written examinations which the Parliamentarians thought would be inadequate and too time-consuming. They might have recalled old instances at the UMPS when often examination results were not reported until a year later. Therefore, they insisted that a Test Bureau be created, but they were afraid that the Government

[1]Virasai, op. cit., p. 53.

or responsible persons in the University might simply take it in now but could later abolish it by way of issuing an Announcement from the Office of the Prime Minister as stipulated in Article 7, which says that creation or abolition of any unit of the University can simply be done in such a fashion.

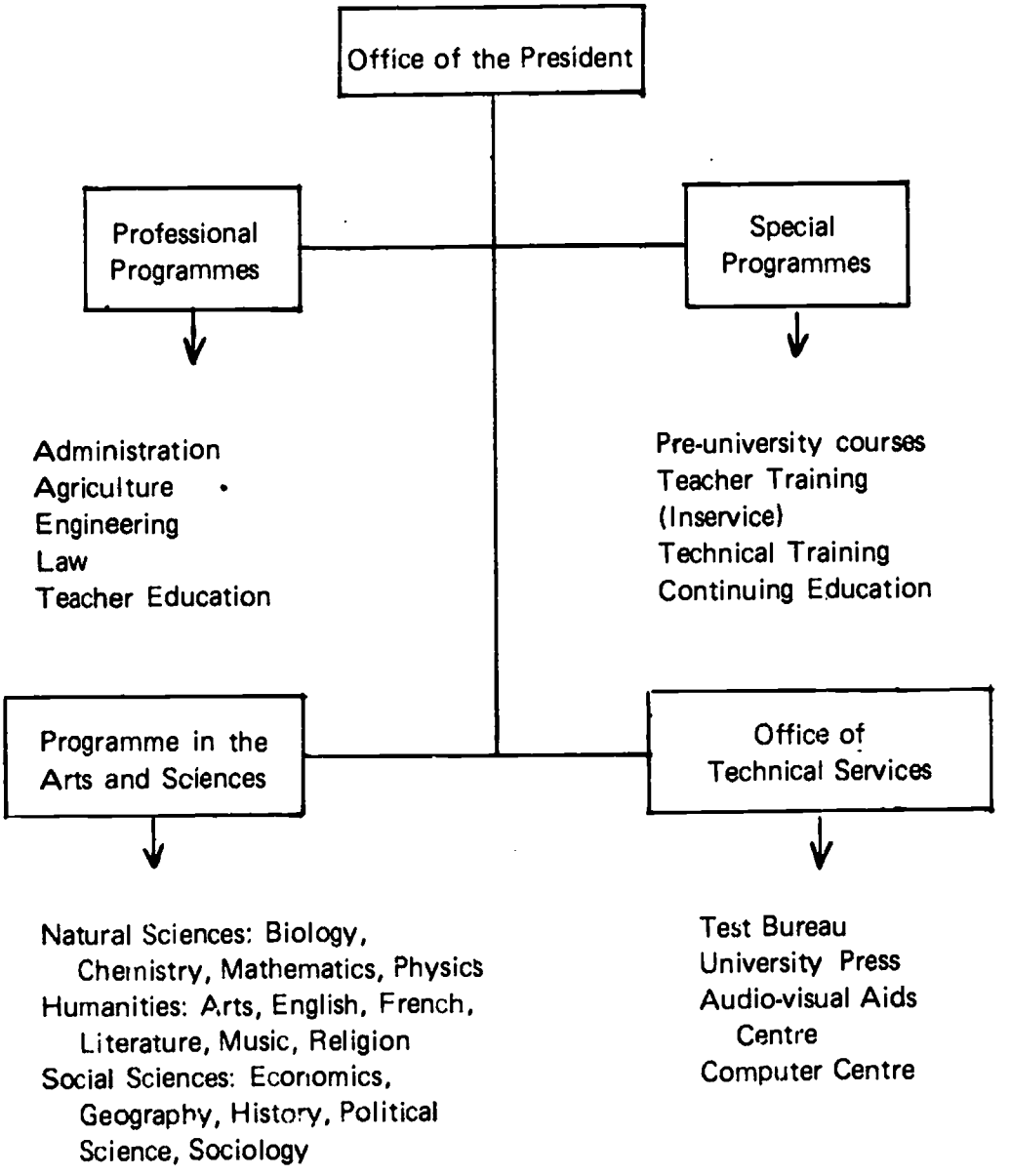
The setup of this University does not follow the line of this author's thinking which aims at flexibility, versatility and serving the country manpower needs except for one point on the Office of Technical Services. In the aforementioned article, this author suggested an organization which looks like the following chart (Chart I).

The present organization of the University, according to information gathered from its most recent publications, should look like the following chart (Chart II).

In the ***Programmes of Studies for Bachelor's Degrees*** booklet, Ramkhamhaeng University has announced many degree programmes which could be listed as follows

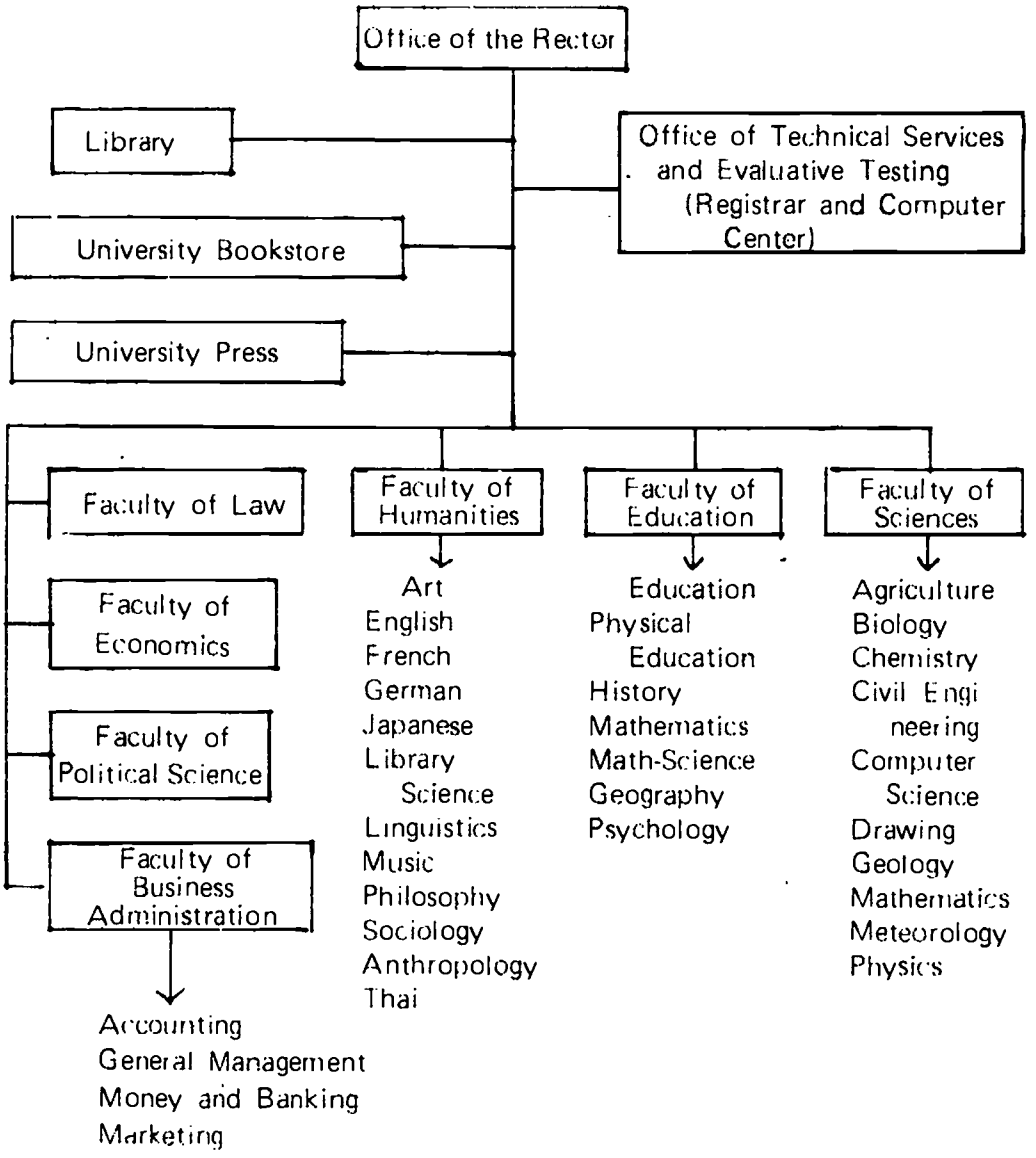
1. Faculty of Law
   - Bachelor of Law (LL.B.).
2. Faculty of Business Administration
   - Programme of Study leading to the Bachelor's Degree in Accounting, General Management, Money and Banking, and Marketing (B.S. and B.A.).
3. Faculty of Humanities
   - Programme of Study leading to the Degree of Bachelor of Arts (Thai, English, French, History, or Library Sciences).
4. Faculty of Education
   - B.A. (Education) Teaching Major and Minor (Thai, English, History, and Social Studies).
   - B.S. (Education) Teaching Major and Minor (Mathematics, Science, and Geography).
   - B.S. in Psychology (Social Psychology Programme, and Counseling and Guidance Programme).
   - B.S. in Geography (Cartography, and Social, Economic and Cultural Geography).
5. Faculty of Sciences
   - B.S. in Mathematics, Statistics, Chemistry, Physics, and Biology.
6. Faculty of Political Science
   - B.A. in Political Science.
7. Faculty of Economics
   - B.A. in Economics.

CHART I: PROPOSED ORGANIZATION CHART



Source: Amara Raksasataya, "An Open University," Education in Thailand, U.S. Department of Health, Education, and Welfare Publication No. (OE) 72-61, p. 115

CHART II: RAMKHAMHAENG UNIVERSITY ORGANIZATION CHART



Sources

1. Ramkhamhaeng University, Announcement of Courses Including Final Examination Schedule, First Semester 1973 (20 June 20 October 1973), Ramkhamhaeng University Press, 1973.

2. Ramkhamhaeng University, Programmes of Studies for Bachelor Degrees (in Thai, translated by the writer), Ramkhamhaeng University Press, 1973.

The above announcement indicates that there are seven faculties, not four as stipulated in the enabling Act. These additional faculties have not been proclaimed formally but are likely to get an approval. Further, in the ***Announcement of Courses*** several other courses are mentioned, namely, agriculture, computer science, civil engineering, drawing, German, Japanese, linguistics, meteorology, music, physical education, philosophy, sociology, and speech. The status of these courses is not certain. Some are likely to become departments while some will merely mean groups of subjects open for student options. Some undoubtedly will eventually become faculties.

Judging from the two booklets, it is another wonder that the young University has been so ambitious as to announce the granting of degrees in so many fields. It is also important to note that whenever science and technology fields are offered, the intensive use of laboratories will be necessary. It is still unknown whether this will affect the nature of the open-door university or not, since this philosophy implies that students will not be required to attend classes. The study of science and engineering, by their nature, make class attendance and practice a necessity.

Thammasat University had a traumatic experience when it wanted to create a Faculty of Liberal Arts in the anticipation that the Faculties of Science and Engineering would follow. It had to switch from open-door to competitive entrance examination to achieve this. Yet the Faculties of Science and Engineering have not been materialized, mostly for reasons of funding. Whether Ramkhamhaeng University's intention is to create several more faculties or merely to open science and technology programmes aiming at serving community interests along the line of special programmes suggested by this author is not certain.

III. The Staff

Dr. Banphot Virasai's article reports that Ramkhamhaeng University has been successful in recruiting top administrative personnel, and middle-level management. They were all transferred from other units in the Government even prior to the opening of the University, however, he did not elaborate as to the quality of those transferred. Clerical staff was mostly recruited through competitive civil service examination though some were transferred from other units.

The recruitment of instructors, on the other hand, poses some problems since the country is short of educated persons with at least an M.A. degree from a respectable institution at home or abroad. Yet the recruitment problem is not so acute, as Ramkhamhaeng University is in Bangkok where it attracts

brain drain from provincial institutions in addition to the concentration of brain already prevalent in the capital. In addition, special lecturers from other institutions and government or even private organizations may be invited to teach on an hourly basis. Recruitment of teaching staff for the Faculties of Education and Humanities is relatively simple, while the other Faculties face different problems. The Faculty of Law could not find many qualified jurists as they prefer a highly prestigious job in the courts. Therefore, Ramkhamhaeng University has resolved to hire retired judges (over sixty years) on a non-permanent basis. The Faculty of Business Administration has had difficulties recruiting people to teach in accounting out not in business administration or economics because the former got much higher pay in private business.[1]

Yet the staffing of the new University must be regarded as successful, at least in terms of immediate needs.

Let us examine other aspects of personnel recruitment. The Government has already authorized for its first two years of operation a total of 687 positions divided by classes into 13 special (top), 64 first, 220 second, 190 third, and 200 fourth. In addition, there are hundreds of non-civil service personnel, mostly for manual services.[2]

In terms of professional posts, Ramkhamhaeng University was able to transfer 73 people in its first two years. They were classified by academic background as shown in Table I.

In addition to those transferred, Ramkhamhaeng University has recruited by way of selection and examination a total of 208 faculty members. Table II shows their academic background.

When the two tables were computed, the total professional staff strength in terms of academic background will look like that shown in Table III.

Considering the above data, it is all too apparent that while Ramkhamhaeng University's faculty members are able to provide basic teaching services, it is still short of instructors in all fields if we compare this to the large number of students in each faculty (see Table IV), even though we do not expect all the students to attend classes. At the same time, not all of these

[1] Ibid., pp. 50-52.

[2] Personnel data used here and below was supplied by Mr. Sathien Homkachorn, who is working on a Master of Political Science's thesis at Chulalongkorn University. This author is grateful for his assistance.

TABLE I

PROFESSIONAL STAFF RECRUITMENT BY TRANSFER

Faculty	1971			1972		
	Bachelor	Master	Doctorate	Bachelor	Master	Doctorate
Law	4	3	4	—	2	1
Business	3	8	1	1	—	—
Humanities	4	11	3	—	1	—
Education	1	10	2	2	1	—
Technical Services	3	3	—	5	—	—
Total	15	35	10	8	4	1

TABLE II

PROFESSIONAL STAFF RECRUITMENT BY SELECTION AND EXAMINATION

Faculty	Budget Year 1971		Budget Year 1972	
	Bachelor	Master	Bachelor	Master
Law	8	5	7	5
Business	8	5	10	11
Humanities	7	8	6	12
Education	9	17	33	34
Technical Services	8	3	8	4
Total	40	38	64	66

TABLE III

PROFESSIONAL STAFF STRENGTH

Faculty	Bachelor	Master	Doctorate	Total
Law	19	15	5	39
Business	22	24	1	47
Humanities	17	32	3	52
Education	45	62	2	109
Technical Services	24	10	–	34
Total	127	143	11	281

TABLE IV

RAMKHAMHAENG UNIVERSITY STUDENT STATISTICS

Faculty and Major	Enrolment			Remaining Student		
	1971	1972	Total	1971	1972	Total
Law	22,928	4,428	27,356	23,046	4,391	27,437
– Law	22,928	3,246	26,174	22,571	3,225	25,796
– Political Science	–	1,182	1,182	475	1,166	1,641
Business Administration	8,349	2,514	10,863	7,629	2,490	10,119
– General Management	5,260	329	5,589	4,622	326	4,948
– Finance and Banking	–	379	379	38	376	414
– Marketing	–	120	120	10	120	130
– Accounting	3,089	887	3,976	2,791	879	3,670
– Economics	–	799	799	168	789	957
Humanities	1,721	537	2,258	1,710	535	2,245
– English	368	208	576	404	208	612
– Thai	264	51	315	242	51	293
– History	702	129	831	681	128	809
– Library Science	387	59	446	365	58	423
– French	–	90	90	18	90	108
Education	4,200	1,307	5,507	4,149	1,297	5,446
– Education	3,595	555	4,150	3,515	549	4,064
– Psychology	531	90	621	506	90	596
– Geography	74	13	87	73	13	86
– Mathematics	–	527	527	33	524	557
– Statistics	–	122	122	22	121	143
Total	37,198	8,786	45,984	36,534	8,713	45,247

professional personnel are engaged in teaching as some are assigned to the Office of Technical Services and the Demonstration School, which, created since 1972, are attached to the Faculty of Education.

Two other significant problems are observable from Table III, firstly, the disproportion of highly qualified instructors. It is clearly a great disadvantage to have only 11 doctorates, out of 281 members. This would be hardly adequate to provide leadership in the future. They would not even be enough to be assigned to all departments. Besides, all positions of chairmanships are of fixed tenure and cannot be removed without cause. Secondly, there is a high number of instructors with only a bachelor's degree or its equivalent. It may be a necessity to recruit them to fill immediate needs at the beginning. They may be willing to act as tutors for a few years, but they would hardly be expected to remain so forever. Chances for further development must be provided. Yet these chances are likely to be very limited in terms of funding, and more importantly, in terms of their own academic competence. While grants are hard enough to find, seeking a place for graduate study at a reputable institution is much harder, even for a very qualified person. Therefore, the chance is that Ramkhamhaeng University will face a more complex staff problem in the future.

Distribution of sexes among instructors is also likely to generate problems. While male-female ratio for the entire University is 49 : 51, the difference among faculties varied greatly. The Law School has many more men (43 to 7) whereas the Business and Education Faculties have more women by about five to four. The Faculty of Humanities is very lopsided with a ratio of about one to three in favour of women. While male-female ratio here may please the women's liberation movement abroad, it is necessary to note the great cultural difference in the Thai society. Here, married women have to be in charge of all the details of the family affairs and have very little time left for professional work. At the same time, no Thai lady is likely to prefer self-actualization to family coherence. Therefore, the University intellectual life is likely to be sacrificed.

These are some of the highlights on personnel achievements and prospects. This author could not but remain convinced that Ramkhamhaeng University should concentrate on having only a few highly qualified instructors who could lecture in large classes with the help of audio-visual aids, and hire more part-time personnel, mainly graduate students, to act as tutors. The risk of hiring large number of persons with little academic training background is simply too great. If we could watch the performance of the part-time tutors and take in those with proven ability and inclination, we would be on much safer ground.

IV. The Facilities

At the beginning the University was operating on a make shift basis. Its location was on a 75-acre trade fair ground belonging to the Ministry of Commerce, which was not willing to give up the premises. Therefore, Ramkhamhaeng University had to remodel trade fair stalls for its immediate use, and build a few semi-permanent two-floor buildings for classrooms. After two years of uncertainty the Government has just decided to let Ramkhamhaeng University occupy the present site. A new space layout and construction plan seem to be needed.

While the location and classroom space problem have been hovering for so long, the other educational facilities are being developed with great success. Audio-visual facilities seem to be adequate. Closed-circuit televisions are installed and have been in use effectively for some time. The computer facilities are also adequate for the processing of student registration and records as well as for processing some 190,000 answer sheets of objective type examinations in time for every large class, in addition to subjective examinations with hand grading. Secrecy in governing examination processes has been maintained satisfactorily. All told, Ramkhamhaeng University personnel have done quite a splendid job in starting and operating this mammoth university on such short notice and short supply since it received about 23 – 25 million baht budget or about US$1 million to provide education for 37,000 students, or about US$35 per head.

Another success Ramkhamhaeng University has scored is in its publication programme. It has modest printing facilities which are able to print out questions and answers for all its students, which amount to 1,000,000 pieces per semester. In addition, during the 1971 academic year it has published 60 books and monographs. In the 1972 academic year 84 titles were published. Though a few of these are of international textbook standard, many of them are merely lecture outlines and notes. In addition, a lot of lectures are published and distributed as loose-leaves. It is an absolute necessity to provide literature to students from all over the country. There is a mailing service to send these materials anywhere on demand.

V. The Students

As soon as Ramkhamhaeng University opened its door for admission, it at once became the largest university in Thailand. Its first batch of students totalled over 37,000 with the addition of nearly 9,000 in the following year. Therefore, by 1974 when it will have all four year classes the students are likely to number around 65,000.

Statistics shown in Table IV indicate students by schools and departments up to 26 April, 1973, prior to the opening of the 1973 academic year.

The difference between the first set and second set of figures reflects the fact that within each academic year there are a number of students who transfer between schools and departments. Some of them even resigned because they did not think that they could graduate within the seven-year period, or they could not afford it, especially if they lived out-of-town. For transfer students, the original date of admission has been kept and counted toward the seven years' total. Therefore, few people chose to resign and requested to be readmitted in another programme.

It should be expected that for such a vast number of students there will be a lot of difficulties. Let us examine some of them here.

First, as a result of the large number of students plus its unexpected opening, the Ramkhamhaeng University graduates, two years from now, will inundate the employment market. At the moment, the Government Economic and Social Development Plan III (1972 – 1976), prepared before the creation of Ramkhamhaeng University, already envisages surplus manpower in the areas of social sciences, law, humanities and some professions like education. The Ramkhamhaeng University graduates will certainly aggravate the problem of educated unemployment with a probable political repercussion.

However, as the standard of education at Ramkhamhaeng University is attempted to remain high, the large enrolment figures may not mean huge number of graduates. For instance, there is a private estimate that out of over 8,000 Business School students only about a hundred will be likely to graduate in the first batch. However, this calculation does not say how many will finally graduate in successive semesters. Even if a fifth of those enrolled finally graduate within the seven years' prescription, the impact on the employment market is likely to be immense.

Traditionally, the university graduates will look for employment in the Government. However, the Thai public service is expanding slowly now – at the rate of 10,000 new employees for all levels a year. Out of these, roughly 4,000 posts will probably require a college education. Yet this number is already oversupplied. How could the public sector accommodate 10,000 more graduates from Ramkhamhaeng University? Let us look, for example, at the Department of Political Science of the Law School. In 1971 it had 475 students, and 1,166 more the following year. Already other Thai universities have overproduced political science graduates. It is often said that it takes them on

the average of three years to find a job. For them, the opportunity in the private sector is very minimal.

A little light appears in the tunnel. Current students by curiosity or by sense of survival have shown keen interest in taking courses in mathematics, science, and technology. Given the limited laboratory facilities available, they are willing to wait to take such courses. Coupled with the fact that the employment market is still short of manpower in these areas, maybe it is wise to move in this direction more forcefully.

Problems associated with sheer numbers also include student-faculty relations. Traditionally, Thai instructors enjoy immense prestige. Students will normally bow or "wai" to their teachers, but at Ramkhamhaeng University they are going unnoticed. In June 1973, the crises of student-faculty relations turned to violence. The Rector, Dr. Sakdi Pasuknirunt, and the faculty were of the opinion that the behaviour of nine students was defaming the University's prestige, and had them dismissed. This touched off the largest student demonstration in Thailand on 21 June with about 20,000 students from every institution participating. Some estimated that only 3,000 — 4,000 demonstrators were Ramkhamhaeng University students. They believe that the nine students were dismissed because of certain political views, not really a misbehaviour. The issue was, from the students' standpoint, their right to express political opinion. Therefore, the Rector was labelled oppressor and had to be dismissed. The mass demonstration paralysed part of the city for two days. On 26 June, about 5,000 Ramkhamhaeng University students paraded to the Government House to have Dr. Sakdi dismissed. The Government felt compelled to compromise with the students so the nine dismissed students were later reinstated, and the Rector handed in his resignation. The latter event caused a group of some 3,000 Ramkhamhaeng University students to counter protest in favour of reinstallment of the Rector.[1]

Even before the student demonstration the relationship was not very cordial. Some students regard as their rights prompt and uninhibited services. Whenever there is a slight delay or different interpretation of rules and regulations, they can petition to higher authorities who often rule in their favour, thus bypassing the officials who meant to do their jobs impartially.

The nature of this University is such that student body itself is highly heterogeneous with a variety of social and cultural differences. Dr. Banphot reported that in the first batch three students had already got Ph.Ds., a good

[1]Up to January 1974, the Rector's post is still unfilled.

number have B.As. or M.As.; in occupations and careers a large number is already employed in posts ranging from top executives and generals to clerks or even janitorial personnel. Most are unemployed, and facing tough competition, however. The freshmen varied in age from 17 to 71 years.[1] They come from various economic and psychological backgrounds. Many well-to-do parents actually pull the boy's hand to enter Ramkhamhaeng University instead of sending him abroad, which is both expensive and likely to produce cultural malaise. At the other extreme, a lot of them come to the University with empty stomachs.

Life at the University, therefore, is very diversified. At one end, there are lots of serious students coming to the University to get education, while others prefer to mix study with leisure. The latter may organize sports and other cultural activities more or less like others in the sister institutions. There are other people, some who are not even students, who come to the campus for purposes other than to study. It is safe to assume that as far as students are concerned, the life at the University is going to be quite uncertain, though in the main, order will prevail.

All in all, any impartial observer would have to admit, as well as to congratulate all the people concerned, that the University has been able to function relatively well. It has achieved its primary goal of providing inexpensive education to those qualified on an open-door basis. Its leadership was able to attract enough people to join the administrative and instructional posts. Though the physical plants are still inadequate, its computer services, audio-visual aids and publication programme are at least effective. Yet this is no time for complacency. The task ahead is much more complex. A few major problems loom ahead. Firstly, there is a leadership vacuum created by the departure of its first Rector and close associates. Perhaps, a University of this size and complexity is truly unruly. Perhaps, no other Rectors will survive for long. Secondly, the instructional staff will pose a variety of problems. Ways must be found to build younger staff for the Law School, whereas in the others more mature, highly qualified males will have to be developed. Ways must be found or invented to utilize existing personnel to the best advantage. New schools for science and technology may perhaps be desirable in terms of staff satisfaction, but possibly could be better arranged as special programmes aiming at professional vocational proficiency rather than academic excellence. This is an important decision unless the University or its sponsor, the Government, is willing to pay much more to satisfy student psychological needs, and perhaps to change its nature from the open-door model to the closed-door pattern

[1] Virasa, op. cit., p. 48.

at least in some programmes. It is also obvious that the number of students will continue to rise, and consequently, its graduates will flood the employment market, especially in the soft science areas. Perhaps, the aforementioned special programmes in science and technology plus a positive government policy for the better utilization of manpower in the private sector will help.

On the other hand, craving for higher education in other parts of the Kingdom as seen by large number of out-of-town students could be better served by setting up a network of two-year community colleges. In such case, the needs of the individual, the country and communities outside the Bangkok metropolis will be entertained.

Lastly, the student problems will have to be reckoned with. Certainly, the student body, heterogeneous as it is, will be susceptible to various political ideologies. Peace is hardly possible in an overcrowded community, scholarly or otherwise. Even so, sophisticated and mature leadership will certainly spell a difference.

PART V

REPORT OF PROCEEDINGS: SUMMARY AND RECOMMENDATIONS

SUMMARY OF THEMES

Charles F. Keyes
with the assistance of
Susan Miller

INTRODUCTION

Few of the institutions of higher education in the countries of Southeast Asia existed prior to World War II. Since the war, and particularly since the end of colonial domination, there has been a very rapid expansion in higher education in all countries of the region. Many new institutions have been created and older institutions have been expanded to include many more components. Enrolments in both old and new institutions have also greatly increased.

The Regional Institute of Higher Education and Development (RIHED) considered that it was appropriate that some stocktaking be made of the causes and consequences of expansion of higher education in Southeast Asia. The keynote was set by Prof. Aroon Sorathesn, the Minister-in-Charge of the State University Bureau of Thailand who, in his opening address, stated:

> "In this day and age it is very easy and natural to assume an attitude that the more universities we create, the faster will our countries move ahead. This assumption is not always valid and should be critically examined."

That expansion of higher education in Southeast Asia should be critically examined was apparent in the theme chosen for the workshop: "Expansion versus Consolidation."

There was agreement among the participants as to what was meant by the term 'expansion.' Expansion in higher education can mean increase in the number of institutions of higher education, in the number of components within existing institutions, and/or in the size of enrolments in both older and new institutions. While there was less agreement as to what was meant by the term 'consolidation,' there was some consensus that it implied the efficient use of resources to improve the quality of existing institutions.

It was apparent from the papers and the discussion that these two are not considered totally opposed modes of approach to higher education. One of the persistent themes of the workshop was that there should be a balance between these two. The question was then how to effect such a balance. The answer to this question is, in large part, dictated by the goals a particular society sets for itself.

The factors which determine the setting of educational policy are, in part, unique to each of the societies of Southeast Asia. For example, it was pointed out that in the Khmer Republic the war preempts all other considerations. In Laos, there has been a total absence of institutions of higher education until quite recently. Singapore, in its population size, geography, and economy, is quite unlike any other country in Southeast Asia. Nonetheless, there are common concerns among the countries of the region and the hope was also expressed a number of times during the workshop that the various countries could learn from the experiences of other countries in the region.

EXPANSION OF HIGHER EDUCATION: CAUSES AND ORIGINS

The causes of expansion of higher education in Southeast Asia were found to be relevant to the concerns of the workshop because they involve factors which must be taken into account in the responses to expansion. It is clear from the papers and the discussion that expansion was not limited to being a response to the needs of a developing economy. The various causes leading to expansion of higher education which were noted might be grouped under two major rubrics: (1) response to social demands and (2) response to manpower needs. Social demands, it was observed, could arise from strictly demographic causes (i.e., from growth in population), from values on non-manual work and/or the statuses associated with higher education, from popular perceptions that higher education leads to economically more-rewarding occupations, or even from such cultural values as "love of learning" (as was noted for Vietnam). Under the second rubric, expansion of jobs in any sector (industry, government civil service, etc.) for which education at the tertiary level is required or preferred could be the cause for expansion of higher education. Expansion due to social demands or to manpower needs could be effected through either 'free enterprise' by private interests or by political action on the part of a government.

The greatest expansion appears to have occurred in the Philippines where a 'free enterprise' system was permitted to respond to social demands for increased numbers of places in the institutions of higher education. Expansion of Indonesia's institutions of higher education was also primarily a consequence of response to social demands, although in Indonesia the Government rather than private interests served as the midwife for the expansion.

In Singapore, and to a great extent also in Malaysia, expansion of higher education has been controlled by the Government to produce qualified personnel for new jobs created by an expanded economy. To the extent that conditions permit, the Khmer Republic has also attempted to follow a similar path.

In both Thailand and Vietnam, expansion has also been mainly a function of government-controlled efforts to meet expanding manpower needs. However, in Vietnam and, more recently, in Thailand, some expansion has also taken place as a consequence of social demands.

In Laos, no factors necessitating expansion of higher education have been recognized until quite recently. This, it was pointed out, was a legacy of French colonialism.

Whatever the causes for expansion, it has created certain problems everywhere.

PROBLEMS OF EXPANSION OF HIGHER EDUCATION

Problems consequent upon the rapid expansion of higher education were recognized by various participants, although not all problems occurred in every country of Southeast Asia. Moreover, it was also pointed out that many of these problems were not unique to institutions of higher education in the region.

1. Too Rapid Expansion Can Lead to Deterioration of Quality of Higher Education

If there is too rapid expansion in higher education, enrolment size relative to faculty, that is, the teacher student ratio, may worsen. If faculty is expanded to be commensurate with expansion of enrolment, there may not be sufficient numbers of qualified staff to fill the positions. Thus, at the staff level, too rapid expansion of student enrolment may lead to problems of too few teachers (a problem of quantity) and/or too few qualified teachers (a problem of quality). In either case, the quality of instruction deteriorates.

University teachers are faced with heavy demands on their time in order to deal with students both inside and outside the classroom. They become less able to carry out research and, thus, the role of the university as a producer of new knowledge deteriorates.

If there is too rapid expansion in higher education, there may not be sufficient numbers of qualified administrators to fill the necessary positions. Thus, the quality of administration in institutions of higher education may also deteriorate.

Facilities may also not be expanded commensurate with the expansion in size and/or number of institutions of higher education. The absence

of adequate facilities may also reduce the quality of the institutions.

Students coming from institutions of low quality may find it difficult to obtain admittance to advanced programmes in other institutions in the region or in the West.

2. Too Rapid Expansion of Institutions of Higher Education May Result in Graduates Not Always Being Best Suited to Manpower Needs

This point was rather more debatable, although many felt that with too rapid expansion, particularly if caused by social demands coupled with political pressure, disciplines and vocational training which were not most needed for the occupational needs of the society could proliferate. Examples were given of overproduction of graduates in the humanities, liberal arts, law, and sociology. Such graduates, in turn, find it difficult to obtain jobs which are suited to their education or training.

A number of participants questioned whether all education should be job-specific. It was also suggested that job qualifications become upgraded when there are better trained people qualified to fill them.

This upgrading of job qualifications was seen by others, in contrast to the above position, as a form of 'inflation.' That is, many jobs which could be filled by people with more appropriate education obtained at levels below higher education would now be filled by graduates.

Whether the qualifications of jobs filled by graduates were "upgraded" or "inflated," it was apparent from the Filipino case that when a large percentage of jobs are filled by college or university graduates, the average age at which people enter the labour force is advanced. Where jobs are relatively scarce, this may be an advantage. On the other hand, where the job market is rapidly expanding, as has been the case with Singapore, the postponement of entrance into the labour force may be disadvantageous. In short, whether rapid expansion of higher education actually produces problems in the form of unemployed or underemployed graduates depends on the character of the job market in any particular society. In terms of planning, it would appear that an evaluation of the character of the job market and of the time when it is best for people to enter the market should be undertaken on a continuing basis.

3. Too Rapid Expansion of Higher Education May Lead to the Inefficient Use of Public Resources

As most higher education in Southeast Asia outside of the Philippines

is supported by public (government) monies, it is essential to ask whether or not these monies are being efficiently invested. From the papers and discussion it would appear that quality education for the few is no less expensive than quantity education for the many. It was pointed out that there was a high "wastage" rate in quantity education; however, it was also admitted that it might be politically expedient to permit many more people to enter institutions of higher education than will be able to finish. On the other side, it was also pointed out that it was very expensive to maintain the staff and facilities necessary for the production of a small number of quality-trained graduates. Nonetheless, if such graduates are essential to the effort to meet national goals, such expenditure may be justified.

It thus appeared that the question of whether or not expansion of higher education leads to inefficient use of public resources or not is not necessarily one of whether higher education is to be open to large or small number of students. Rather, the issue is whether expansion undercuts efforts to maintain rational plans for articulating higher education to national goals. Insofar as rapid expansion does produce this effect, then it could be said to cause inefficient expenditure of public monies.

4. Too Rapid Expansion of Higher Education May Lead to the Creation of Institutions Whose Enrolment Sizes Make Them Unwieldy

There was some discussion about the optimal size of universities (and other institutions of higher education). It was suggested on the basis of a study in Indonesia that 5,000 was an optimal limit. However, several universities which were discussed, including Ramkhamhaeng and Chulalongkorn Universities in Thailand and Saigon University in Vietnam, greatly exceed this size. There was some support presented in the case study of Ramkhamhaeng for the position that universities can be too large to be effective institutions. However, the question was not pursued.

5 Too Rapid Expansion of Higher Education May Lead to Political Activism among Students

This point was mentioned by several participants. Others countered by suggesting that if too few places in institutions of higher education are allowed to exist, there may be a great upsurge of frustration among high-school leavers who are barred from admission to higher education.

CONSOLIDATION

The discussion of 'consolidation' turned on the theme of rational planning

directed towards the articulation of higher education with the national goals of a society.

1. Coordinating or Planning Bodies and the Relationships between Government and Institutions of Higher Education

There was consensus that coordinating or planning bodies should exist at the national level. However, there was debate about what types of bodies should do such planning and how much power such bodies should have. Some felt that government bodies should be given more 'teeth' than they already have. Others, however, feared that by vesting too much power in government bodies, the autonomy of institutions of higher education would be undermined. As an alternative, it was suggested that there should be two types of bodies: (i) government bodies which were able to draw upon knowledge of both national goals and of the particular characteristics of all institutions of higher education in a country and (ii) bodies which consisted of representatives of the institutions of higher education. It was further suggested that coordinating or planning bodies should also draw upon representatives from sectors outside of education and government – e.g., from industry and labour – so that institutions of higher education could be made responsive not only to government but also to those sectors which employ graduates of the institutions. Finally, there was concern expressed that too many bodies could frustrate the efforts of these bodies to accomplish their goals.

In addition to national coordinating bodies, there were several who suggested that regional bodies might also play important roles.

2. Meeting of Manpower Needs

While there was some consensus that higher education should be geared to 'manpower needs,' there were differences of opinion as to what was meant by this term. These differences centred on the question of what types of occupations should institutions of higher education be training students to enter.

A number felt that too great an emphasis was placed on university education and that more emphasis should be placed upon institutions which train middle-level manpower. However, it was pointed out that such middle-level manpower institutions often attempts to upgrade themselves and to transform themselves into universities. As one participant expressed it, there seemed to be some magic about calling an institution a 'university.'

One participant said that expansion in higher education should be opposed in those fields where there is clearly overproduction. Again, the humanities, the law, and liberal arts were pointed to as examples. In contrast, there was a clear need for technically-trained personnel. A number of participants strongly resisted the idea that higher education should be geared to producing primarily for needs in technical fields directly related to economic development. Some suggested that it is difficult to predict manpower needs very far into the future for technical fields. The example was adduced of the overproduction of engineers in Thailand. Still others stressed the importance of taking "non-material" needs into consideration as well. One such non-material need was that of a society to have trained personnel who are capable of preserving and promoting the cultural components of national identity. Yet another non-material need which was stressed by others was the need for people who can work to promote social justice in society.

The question of whether education should be job-specific was raised in conjunction with this point. Some advocated the desirability of having administrators, both in government and in the institutions of higher education themselves, who are not trained in the fields of 'public administration' or 'university administration.' Others suggested that there is no particular advantage to having technical or vocational training in the schools and institutions of higher education; it is often done better on the job.

There was general agreement that institutions of higher education could not simply be vocational schools but should also be institutions where people are taught to think.

3. Emphasis on Quality

A number of participants advocated that quality should be emphasized in institutions of higher education. In Indonesia, effort towards this end has recently been undertaken by the creation of ***pembina*** universities – that is, national centres of excellence. In the Philippines, efforts to upgrade the quality of education in colleges and universities has been made recently through the introduction of national college entrance examination and by a moratorium on the creation of new colleges and universities.

While there appeared to be support for an emphasis on 'quality,' there was some debate as to what is meant by 'quality' with reference to education in institutions of higher education in Southeast Asia. One

participant suggested that the emphasis should be on 'academic relevance,' with 'relevance' being defined in reference to the needs of Southeast Asian societies, rather than on 'academic excellence' where excellence implies some international standard. This idea was seconded by another participant who indicated that in his country curricula were being made relevant to development rather than to the progress of science. Yet another participant supported this position, suggesting that an emphasis on quality, with quality being internationally defined, could (and has) exacerbated the problem of the 'brain drain.' On the other hand, another participant queried whether this distinction between 'relevance' and 'quality,' like the distinction between 'applied' and 'pure,' could really be sustained.

4. The Efficient Use of Resources

In attempting to maximize the efficient use of resources in supporting higher education, it was suggested that duplication of specialists should be kept to a minimum within institutions, among institutions of the same country, and among institutions of the region. In the first connection, there was some discussion among the participants about the desirability of having components of the same institution located on the same physical campus in order that interdisciplinary cooperation among faculties might be encouraged. There was also some support for the idea that the autonomy of faculties within an institution should be broken down. As to the second suggestion, there was some discussion about the exchange of faculty and students among institutions of the same country. However, it was also pointed out that the movement of faculty from one institution to another can create problems. Finally, in connection with the last concern, there were several who spoke in favour of regional institutions and of regional exchanges of faculty and students.

MASS HIGHER EDUCATION VERSUS SELECTIVE HIGHER EDUCATION

The issue of mass higher education versus selective higher education again returned the workshop to the problem of definition. The answers to what is mass higher education and what is selective higher education appeared, on the basis of both papers and discussion, to be a function of what goals a particular society wished to maximize. Higher education could be made responsive primarily to social demands, thus leading to mass higher education. Or, higher education could be made responsive primarily to the manpower needs of a society, thus leading to selective higher education. Or, a society could attempt to effect a balanced response to both demands.

1. Mass Higher Education

Mass higher education was perhaps best defined as giving everyone a "chance to try." Nowhere is mass higher education totally 'open' and lacking in 'selection.' Selection takes place at different points in the educational stream in mass higher education than it does in what is referred to as selective higher education, but it does take place. For example, it may take place after the first year following admission; or, it may take place in the examinations given prior to graduation; or, it may take place in the selection of graduates for jobs.

The advantage of mass higher education is that it is 'democratic'; that is, higher education is attuned to social concerns and pressures. It also may serve as a 'safety valve' for pressures from school-leavers who wish to find places in higher education. On the negative side, mass higher education creates a high rate of 'wastage' – that is, non-completion of degree programmes by students or filling of jobs by graduates which are not commensurate with their training. In addition, there appears to be a constant tendency of institutions created to fill the needs of mass higher education to upgrade themselves by becoming more selective.

2. Selective Higher Education

Selective higher education seeks to channel people into the occupations most needed by a society in the most efficient manner possible. It has the advantage of permitting a very low teacher-student ratio, thus providing the students with the opportunity to have tutorial or tutorial-like instruction. It also has a low rate of wastage. On the other hand, selective higher education may be unpopular because of its elitist character and it may help to increase the gap between the educated elite and the masses of a society. This gap may even be wider if the medium of instruction at institutions of higher education is a language other than that of the masses. Finally, selective higher education may contribute to the brain drain by preparing people to fill jobs which are much higher paid in other countries.

3. Balance in Higher Education between Social Demands and Manpower Needs

In attempting to effect a balance between social demands and manpower needs, the concern is with social justice and human rights on the one side and with wise and efficient use of public monies on the other.

It was suggested that the structure of higher education be rethought in

order to reconcile the advantage of the mass education approach with those of the selective higher education approach. One possible model which was suggested was the tiered structure recently introduced in the French educational system wherein education is broken up into small units of time each of which ends with a certificate or degree. Another model suggested was that of the "community college system," a version of which has already been introduced into Vietnam. Yet a third model was the Indonesian "open-door" system of education wherein institutions of higher education offer both degree and non-degree programmes. Institutions of higher education, it was further suggested, need to provide 'continuing education' both for former graduates and for those who have never been candidates for degrees.

It was also suggested that a proper balance could be facilitated through making of institutions of higher education more directly responsive to the job market. Rather than depending upon long-term manpower projections, created most often by bodies exterior to the institutions of higher education, the institutions should develop "short-term manpower signal mechanisms." The role of counselors was suggested as critical in this regard since such people are expected to keep closely in touch with changing needs in the job market.

It was also suggested that universities should be geared not only to filling jobs but also to creating jobs. At this point, it was noted that in all planning regarding higher education, institutions of higher education are often looked upon as machines to be operated rather than as creative agencies of their own. This should not be the case.

It was also suggested that something of a division of labour might be accomplished with government-supported universities emphasizing selective higher education and private colleges and universities emphasizing mass higher education. In this way, mass higher education would be supported mainly by private sources while selective higher education would be supported by government sources. Whether this particular mode of approach is employed or not, it was suggested that consideration should be given as to what proportion of higher education should be publicly financed and what proportion privately financed.

SUGGESTIONS FOR RIHED

There were a number of suggestions which emerged out of the workshop which might be considered for incorporation into RIHED's programme.

1. Investigate what programmes for 'training the trainers' in Southeast

Asia might best be done at the regional level. Existing programmes, sponsored by other agencies, should be examined in order to determine whether successful cooperation between RIHED and these other agencies might be effected.

2. Arrange for the visit of representatives from the countries affiliated with RIHED to places where experiments in higher education are being undertaken.

3. Promote the exchange of students among 'centres of excellence' in the countries affiliated with RIHED.

4. Undertake a study on the question of 'continuing education' in Southeast Asia. Some consideration might be given to the possibility of establishing a Southeast Asian Institute for Continuing Education.

5. Undertake a study of such programmes as Indonesia's 'study-service' programme in order to evaluate efforts to bridge the gap between the educated elites and the masses.

6. Undertake a study on the question of what is the optimal size for an institution of higher education.

7. Undertake a survey of 'programmes of excellence' in all countries affiliated with RIHED.

8. Organize a workhsop on the subject of "How Can Higher Education in Southeast Asia Be Financed?"

9. Organize a workshop on the theme of "Autonomy versus State Control in Higher Education in Southeast Asia."

10. Circulate statistical profiles on higher education in all countries affiliated with RIHED.

11. Circulate documents concerning experiments in higher education in the countries affiliated with RIHED.

PART VI

BACKGROUND PAPER

INDONESIA'S NATIONAL STUDY-SERVICE SCHEME

(Kuliah Kerja Nyata)

Diana Fussell and Andrew Quarmby*

INTRODUCTION

Indonesia is currently pioneering a combined approach to higher education and rural development which is already demonstrating its considerable potential effect in both these fields.

Under a plan for a National Study-Service Scheme (Kuliah Kerja Nyata) suggested by President Soeharto, all university students in Indonesia, as a part of their curriculum, are to be required to spend at least six months living and working in villages, helping to carry out rural development activities.

The two major and interdependent purposes of this new programme are to supply a large resource of young educated manpower for rural development, and to give university students some very practical experience of rural development problems as part of their education.

It is hoped that, as a result of their study-service experience, the students will develop the habit of taking an interdisciplinary approach to development problems, will be more willing to accept employment in rural areas following graduation, will develop more self-confidence and initiative, and will have a much better understanding of rural development needs (i.e. the needs of 80% of Indonesia's population).

It is also hoped that as a result of the experience of the university staff members who participate in the study-service activities in supervisory and advisory roles, and of the experience of the students themselves, the universities will be led to make curricula more related to Indonesia's development needs.

It is also hoped that the large numbers of students (23,000 per year) potentially available through study-service schemes will go a long way towards relieving the great shortage of extension workers in Indonesia, a shortage which is seriously handicapping rural development.

At the moment, the plan for a National Study-Service Scheme is still in

*UNDP/UNV Consultant, working with BUTSI (the Indonesian Board for Volunteer Service) and with Kuliah Kerja Nyata.

an introductory stage. In 1971/72, three universities carried out preliminary pilot projects, and thirteen universities (out of 40 government institutions of higher education) are carrying out study-service pilot projects in 1973/74, involving a total of 432 students.

The Department of Education and Culture plans to increase and expand these projects over the next few years until finally all students in higher education institutions (government and non-government) will automatically undertake at least six months of village-level service as part of their curriculum.

A FOUNDATION OF EXPERIENCE

The origins of the present moves towards introducing study-service activities into all higher education can be traced back to Indonesia's independence struggle, when many of the guerilla soldiers of the Student Army taught while they fought, providing teachers for high schools opened in rural areas to replace schools in the Dutch-held towns.

Many of the key figures involved in developing the present study-service activities were guerillas at that time, and they often say that they see study-service as providing today's students with a challenge that they hope will have profound effects, as did the challenge they themselves faced when young.

Since the end of the independence struggle, a number of significant programmes have been developed to enable Indonesia's young educated to serve the development needs of their country. Three of these programmes have been particularly effective.

Arising directly from the experience of the student guerillas, the PTM Scheme[1] recruited nearly 1,500 university students between 1951 and 1962 to work for one or two years helping to staff newly opened high schools in Indonesia's outer islands. One of the first of these volunteers, and the organizer and administrator of this scheme until it terminated in 1962, was Koesnadi Hardjasoemantri, now Indonesia's Director of Higher Education and the main architect of the current Kuliah Kerja Nyata programme.

For several years beginning in 1963, the BIMAS Scheme[2] involved

[1] Koesnadi Hardjasoemantri, The PTM Project, 14th General Conference of UNESCO, Paris, 1966 (in press with IIEE, Brussels).

[2] E. A. Roekasah and D. H. Penny, BIMAS, A New Approach to Agricultural Extension in Indonesia, Bulletin of Indonesian Economic Studies, No. 7, Australian National University, Canberra, 1967.

senior students of agriculture and related fields spending at least six months living and working in villages helping to increase rice production.

Since 1969, BUTSI,[1] the Indonesian Board for Volunteer Service, has recruited 850 young university graduates for two years of volunteer service as village-level generalist community development workers, and this scheme still continues, with plans for significant expansion in 1974.

It is obvious from the examples above that community service by the young educated is nothing new in Indonesia, and that a very sound foundation of experience exists for the development of a national study-service scheme. A strong philosophical base also exists already in the third of the "Tri Dharma" or three functions (education, research and community service) of Indonesian institutions of higher education.

What *is* new is the size and scale of the scheme now contemplated when compared with the small-scale schemes that have been developed up till now. There are at least 128,000 students of higher education in government institutions, and approximately 77,000 in non-government institutions. Of these more than 200,000 students, approximately 23,000 are at the level of studies where it is proposed to introduce the study-service requirement. This represents a manpower resource of 23,000 people available for deployment as change agents in rural development activities – a major programme indeed.

THE ROLE OF THE DIRECTORATE OF HIGHER EDUCATION

Responsibility for planning and implementing the 13 pilot projects being carried out in 1973/74 rests with the rectors of the 13 universities concerned, which are scattered from one end of Indonesia almost to the other.

Although the Directorate of Higher Education prepared and distributed a set of detailed basic guidelines, each university has been free to develop its own particular form of study-service scheme in accordance with local wishes, needs and conditions. In fact, most of the 13 universities have followed the guidelines closely in many aspects of their pilot projects, and from the results achieved so far, it would appear that these guidelines are very relevant and practical. The following chart which shows the main features of the 13 pilot projects gives some idea of the range of local approaches.

The Directorate has also made available other assistance, notably a grant of Rp750,000 – Rp900,000 (US$1,807 – US$2,169) to each of the

[1] BUTSI, Pioneer and Catalyst. Department of Manpower, Transmigration and Cooperatives, Jakarta, 1973.

13 universities, given on the understanding that the universities should raise other funds locally in particular from their respective Provincial governments.

The Directorate organized a combined national and international seminar on study service at Gajah Mada University at Yogyakarta, in November 1972, and in May 1974 sent two university representatives to attend an international seminar on study service held in Ethiopia.

The Directorate also made available to the 13 universities the services of two consultants (the writers of this paper) on loan from BUTSI.

A JOINT VENTURE

However, the National Study Service Scheme is not a project of the Directorate of Education and Culture only. It is basically a joint venture between each institution of higher education and the local Government in the area where the institution is situated, with additional cooperation with the various government technical extension services and with BUTSI.

This joint approach is very important indeed and is the basis of the proposed system of financing the planned National Study Service Scheme. It is hoped and expected that local Governments, whose rural development programmes will benefit from the services of the students, will meet the bulk of the costs of the Scheme. Indeed, in several provinces, the local Governments are already showing their willingness to do this, as can be seen from the chart.

One of the main reasons for this willingness of local Governments to finance study service activities is the very great shortage of extension workers in rural areas in Indonesia. On average, a kecamatan (subdistrict) contains 17 villages and a population of nearly 40,000 people. To serve the extension needs of these 17 villages and nearly 40,000 people there is usually one extension worker from each of the government departments with a direct interest in rural development activities, perhaps 8 – 10 extension workers per kecamatan.

Obviously, this is quite inadequate for the sort of intensive village-level work needed to have a real impact on rural development. However, although the present numbers of these government extension workers are obviously inadequate, they cannot be increased because the Indonesian Government is finally committed to the policy of not increasing the number of government officials. For this reason, there is a need to seek some other, unorthodox source of extra local extension workers, compatible with the ban on new hirings.

SIGNIFICANT FEATURES OF THE 13 STUDY-SERVICE PILOT PROJECTS CARRIED OUT IN 1973/74

(This table was compiled while pilot projects were in progress and all figures are subject to revision)

UNIVERSITIES	SYIAH KUALA	SUMATERA UTARA	ANDALAS	SRIWIJAYA	PAJAJARAN	DIPONEGORO	GAJAH MADA	BRAWIJAYA	UDAYANA	LAMBUNG MANGKURAT	HASANUDDIN	SAM RATULANGI	PATTIMURA
Number of students in pilot project	14	37	24[1]	139	18	28[2]	36	12	22	27	20[2]	15	40[2]
Number of students per village	1	1-3	6	13-14	1	2	6	2	1-2	1	1-2	2	1-2
Number of students per kecamatan[3]	7	4-5	6	13-14	5-7	14	36	2	22	5-11	9-11	6-8	16-24
Length of time each student at work in village – in months	5	3	5	2½	3	3	1½[4]	2	6	6	3[5]	4	6
Total no. of student-months in villages	70	111	120	347½	54	84	54	24	132	162	60	60	240
Number of faculties sending students	7	6	6	7	3	6	18	5	8	6	9	15[6]	7
Number of faculties not sending students	–	2	–	–	8	1	–	1	1	3	–	–	1
Amount of living allowance received by each student for each full month of village work[7]	$16	$12	$16[8] $36	$12	$22	$12	$19	$24	$12	$16	$17	$12	$22
Probable cost per student per month of work in village[7,9]	$52	$32	$33	$24	$80	$29	$33	$90	$32	$30	$36	$35	$47
Financial support from local sources, i.e. other than the Directorate of Higher Education[7,10]	$ 1446	$ 3614	$ 1807	$ 6024	$ 2289	$ 482	--	—	$ 602	$ 3012	—	--	$ 9036

Notes

1 – 20 students and four newly graduated doctors who acted as team leaders.

2 – Sent to the villages in two successive waves, e.g. in the Pattimura University scheme, 16 students are working in the villages from August 1973 to February 1974 to be followed by a further 24 students who will work from February-August 1974.

3 – A kecamatan is the administrative division immediately above a village, with an average population of a little under 40,000 people.

4 – The students work in the villages for two weeks in each of three months.

5 – The students work in the villages for three days a week over a period of six months.

6 – Includes students from the nine university faculties, from the five faculties of the neighbouring Institute of Teacher Training and Education and from the neighbouring Sports Teachers' College.

7 – Expressed in United States dollars.

8 – $16 for each student and $36 for each doctor/team leader.

9 – This figure includes such items as "consumer education," training, living expenses/pocket money for students, supervision, evaluation, administration, honorarium for staff, etc. It does not include the value of project supplies which are usually contributed in kind, or of village contributions to the students' living allowances.

10 – Not including support in the form of project supplies, e.g. seeds, fertilisers, medicines, insecticides, vaccinations, etc., or in the form of village contributions to the students' living allowances by the provision of board and lodging free or at a reduced rate.

PTM long ago demonstrated the effectiveness of university students as high-school teachers, and BIMAS their effectiveness as agricultural extension workers. BUTSI is clearly demonstrating that young university graduate volunteers, working for a limited period, can be significantly effective as generalist village-level community development workers. However, PTM finished long ago, BIMAS now takes a different form with little student participation, and the number of workers available through BUTSI is very limited, up till now only a few hundred each year (although a substantial expansion of BUTSI's activities is planned).

Now, the universities, with their study-service schemes, are offering a new and much larger source of extension manpower, and local Governments, which so badly need more extension workers to make their rural development programmes effective, are in many cases already showing themselves willing to help meet the costs of these schemes.

ACTIVITIES IN THE FIELD

What contribution are the study-service participants making to rural development that justifies this financial support from local Governments?

Over the past 18 months, one or the other of us has visited at least three times each of the 13 universities currently running pilot projects, to work with the Rector and his staff on the development of their projects. The most recent of these visits have included extensive field trips to visit the students at work in their villages, so we can report at first hand on their activities.

In almost every case, the students are assigned to work as assistants to the Village Head, usually one or two students to a village. Very frequently they live in the house of the Village Head which helps them build a good social and working relationship with him. The Village Head is usually a local farmer, chosen by the villagers, and then invested with authority by the Government, and he is responsible for promoting and coordinating all Government-sponsored development activities in the village. He is also often a key figure in community (i.e. other than Government sponsored) initiatives towards village development projects.

From their situation under the wing of their Village Head, the students are in an excellent position to become involved in each and every development activity in the village, depending on their inclination and ability. In almost every case the universities have assigned their students as generalists, i.e. with the task of working in all fields of development activity, and not just in those of particular relevance to their particular field of study, so they are free to take the measure of every opportunity that offers itself.

At first, it might seem to be asking too much of the students to expect them to be active in fields other than their field of study without lengthy training. In fact experience shows that in most villages not a great deal of technical knowledge is required by the students to make a considerable impact on the existing situation, and what technical knowledge is required is usually readily available from the brief training the students receive before starting work, from their fellow students, from other faculties, or from local extension officers. What is needed is not great technical knowledge, but the ability to effectively transfer even simple technical knowledge.

Village Administration

Many of the students spend part of their time helping the Village Head to improve his handling of village administration matters, including keeping village statistics up to-date, organizing systematic handling of correspondence and reporting, and helping to explain to villagers the reasons for various Government taxes.

The students frequently help villagers to plan, organize and carry out "gotong royong" projects (voluntary community self-help manual labour projects, including building or repairing roads, bridges, drinking water supplies, irrigation canals, churches and mosques, schools and village halls) for the tradition of "gotong royong" is still very strong indeed in Indonesian villages.

The students often help the Village Head and the Village Committee to plan how to make effective use of the "Village Subsidy" of Rp100,000 that each village receives from the Government each year.

Demonstrations and Courses

The students cooperate with extension officers of the various government departments concerned with rural development to plant trial plots of new crops or improved varieties of traditional crops, to conduct fertilizer demonstrations, poultry keeping demonstrations and fisheries demonstrations, to vaccinate village poultry against Newcastle disease, to run courses on many subjects including nutrition improvement, dressmaking, health care, family planning, agriculture, horticulture and animal husbandry, and to help village school teachers.

Cadre Formation

The students do not act as advisers only, but in most cases become deeply involved in projects themselves, working side by side with the villagers; in fact they would have little credibility if they did not. An important part of their

task is to develop cadres of young villagers who will carry on development projects after the students return to their university.

One university gave this process of cadre-formation a flying start by inviting four young villagers (two males and two females) from each of the villages concerned to participate in the training given to the students before they began work. Following the training, the students and the young villagers returned home to their villages together, with an excellent basis established for future cooperation.

Physical Projects and Attitude Changes

Because of the comparatively short period the students spend in the villages (even a six-month period is very short for effective community development work, and many of the universities have not yet reached the six months' target) there is an understandable tendency for the students to concentrate on practical, physical projects that have readily visible results, e.g. road improvement, livestock or crop projects, or the gathering and display of village statistics.

However, many students are also attempting, with some success, the much more difficult, (but also much more important) task of changing villagers' attitudes, e.g. towards family planning, child nutrition, health care, cooperatives, etc.

Coordination and Cooperation

One of the most important roles played by the students is that of fostering coordination and cooperation between the various extension services seeking to help rural development. It is widely recognized in Indonesia that these various services frequently do not cooperate closely enough with each other, and the resulting competition, duplication and overlapping is a great waste of resources and a handicap to development.

The students, by being assigned as generalists (i.e. not specifically in one field of work only) are free to act as village-level agents for *all* the specialized extension services, and many students have developed a very valuable coordinated use of these services at the village-level.

Individual Examples

Some individual examples of students' activities may give some idea of the range of challenges tackled. An engineering student from Syiah Kuala University is helping a villager build a water wheel which will provide power

for grinding grain and also for a village electricity supply.

An animal husbandry student and an education student from Pattimura University are together helping villagers to develop vegetable growing to supply the provincial capital town of Ambon (which currently imports vegetables at great cost from far away Java). They are having to work hard to overcome scepticism on the part of the villagers who once did grow vegetables for this market and were cheated on the proceeds.

Newly graduated doctors serving in pilot projects from Andalas and Hasanuddin Universities are providing village-level medical care and health education for people who have never been to a doctor before.

Students from Lambung Mangkurat University helped organize development planning meetings in their kecamatans (the first ever held there) and then helped the villagers to implement the decisions made at these meetings.

A medical student from Diponegoro University is showing villagers how to increase egg production simply by giving hens improved feed mixed from locally available materials.

In Bali, students of Udayana University are helping villagers to raise eels, thus increasing the protein content of their diet.

A mathematics and science student from the University of North Sumatra is seeking a way to build and install a simple and inexpensive hydraulic ram pump to provide a drinking water supply for his village.

Students from Sriwijaya University are working to conquer the fears which prevent leprosy sufferers from seeking treatment.

Brawijaya University students are attached to newly established village cooperatives and work to increase local understanding and utilization of the cooperatives.

A [illegible] student from Pajajaran University ran a course on family planning [illegible], and all 20 participants in the course became acceptors.

THE EDUCATIONAL EFFECT

The contribution made to rural development by the study service [illegible] may be important but even more important is the educational [illegible] on the students who participate.

Indonesian higher education has come under considerable foreign influence with regard to curriculum content, both inherited from colonial times and imported since, and this has frequently resulted in curricula which could be made more relevant to Indonesia's pressing needs, in particular to the development needs of the 80% of Indonesia's 126 million people living in rural areas.

Coupled with this factor is an unfortunate tendency for education to act as a very powerful urbanizing agent. Intelligent and able village children pass along a one-way "Education Street" from village to town, almost never to return. The rural areas are drained of their bright young leadership, and the towns and cities are choked with young educated, many of whom would rather remain unemployed in towns than return to rural areas to work.

A Short Cut to Change

These problems are well recognized by leading educationists in Indonesia and various steps are being taken to change the situation, including the introduction of "development schools" (schools offering a terminal education relevant to the employment opportunities of the school-leavers) and the reform of higher education curricula. However, progress is inevitably very slow given the size and complexity of Indonesia's educational system.

Study service represents a potentially very effective short cut to making some of the necessary changes, both in the education of individual students, and also in the educational system itself.

The students, who will be in their fourth year of studies, will be brought face to face with the realities of the development problems facing Indonesia today, and asked to do something about them. This is a tremendous challenge, both to the students as individuals, and also to the education they have received up till that time. It is clear from our field visits that most of the students, and most of the university staff members involved with these pilot projects, are responding impressively to this challenge.

The students are tackling development activities both inside and outside their fields of study with a self-confidence that is frequently lacking in the average graduate. They are learning to identify, analyse and solve problems, very real and practical problems that can have a direct effect on the lives of a lot of people in the villages they are assigned in.

They are developing an effective interdisciplinary approach to development, an approach which is extremely important in a country where

shortcomings in cooperation and coordination between government departments are reinforced by an educational system in which students study in their specialized faculties only, with little or no contact with people of other disciplines.

The study-service pilot projects are giving both students and faculty members a chance to examine course content against the realities of the field situation, and the Senate of one university has already gone so far as to decide that as soon as the first group of study-service participants return to the university, a curriculum workshop will be held so that all curricula can be revised where necessary to make them more relevant to rural development needs as evidenced by the university's experience with its study-service scheme.

OBSERVATIONS

What lessons can be learnt from Indonesia's experience so far with study-service activities? We offer the following comments based on our observation of the various pilot projects in action and on the comments made to us by the students, lecturers and other people involved with them.

Challenge

Probably the most important ingredient of a study-service scheme is the challenge presented to each student by being faced with the practical day-to-day problems of the village situation and being asked to do something useful to help solve them. The great majority of the students respond very well to this challenge, and this positive response is the raw material from which can be developed the beneficial effects of the study-service experience.

The students need to be extended by ***genuine*** challenges to their initiative, ingenuity and perseverance, and not by contrived or artificial situations as is often the case in classroom problems. Too much participation by university staff will take these challenges away from the students and give them to the staff instead. Too little participation by university staff may leave the students unsupported and can make the challenge too great.

If too many students are assigned in the one village, this can also result in the challenge being blunted. The most successful system seems to be to assign one or two students to a village, with an interdisciplinary team of students assigned in contiguous villages in the same kecamatan, able to meet periodically to exchange experience and help each other.

Length of Service

Only three of the thirteen universities have so far reached the target

suggested by President Soeharto of the students living and working in the villages for a minimum of six months, although three more are close. However, it would seem that a six-month period is indeed minimal to realize the potential of study-service to contribute to the students' education and, to the implementation of rural development activities, that one year would be considerably better, and that a period of less than six months makes it very difficult for the programme to have a profound effect.

Extension Work, Not Research

An important part of the students' assignment on their arrival in their villages is to conduct a simple survey of village needs and resources as a basis for their later activities. (In most universities this period of village observation took place immediately before the students were trained so that the training could be geared to the actual village situation and so that the students had a reference point to help them understand and absorb the training).

However, apart from this simple and necessary survey, research is not a part of study-service although some universities still have a tendency to try to mix the two, with detrimental results with regard to the students' effectiveness. The students are in the villages to work, to help put into practice some of the considerable volume of research findings on rural development that already exist, not to add to these findings.

There is a separate research programme throughout the higher education institutions of Indonesia, financed through the Directorate of Higher Education with funds from the Five-Year Development Plan and from overseas sources. Compared with study-service activities as they exist so far, research activities are large, well established and well funded, and there seems to be a need to provide some balance to these research activities by increasing the quantity of implementation activities, e.g. study-service, that can put some of the results of this research to work.

Specialist or Generalist?

A controversial aspect of the pilot projects has been the question of whether the students should be assigned to work solely in activities related to their field of study, or as generalists.

Several of the universities began by contemplating using the specialist approach, but in the end, as a result of their own rethinking and observation of IKIP's experience, almost all assigned their students as generalists, one or two students to a village, in contiguous villages in the same kecamatan. The students are thus able to focus to some extent on activities related to their

own field of study, but are also required to be active in other development activities relevant to local needs.

This system gives the students the chance to broaden their horizons, and to understand that development problems in different fields are often closely interlinked and cannot be solved in isolation. However, when they strike difficulties that really do require expertise in a field other than their own, then they are close enough to extension workers and students from other faculties to call on them for help – a very natural and effective way to develop the habit of interdisciplinary cooperation.

The generalist approach also avoids a serious problem faced by one university which assigned its students to work largely in their own field of study – how does one find sufficient studies-related activities to provide an adequate challenge to students in such fields as mathematics?

"Consumer Education"

Even more important than training the student participants is the process of "consumer education." Where village and kecamatan leaders and other local officials are taken into an effective "partnership" by the university, they fully understand the purpose of the programme, they can make full use of the students, and give them needed supervision and support, and the experience is likely to be more valuable for both sides.

Partly because of delays in the availability of funding, some of the universities this year carried out "consumer education" rather sketchily. Considerable time then had to be expended on smoothing out the various misunderstandings and difficulties which inevitably arose.

Feedback to the University

To ease the task of getting the pilot projects under way, many of the universities have drawn their study-service participants from final year students who have finished lectures. This means that most of the participants will leave the university soon after completing their study-service, and the university will lose much valuable feedback from their experience.

When the National Study-Service Scheme is fully established, service will probably take place during ***the year before*** the final year of study. This will give the students the chance to discuss and consolidate their village experience during their final year, and the university will benefit by much valuable feedback.

CONCLUSION

The various study-service pilot projects have laid a very sound foundation of experience and enthusiasm on which a national study-service programme can be built in Indonesia, and it is clear that Indonesia has become a pioneer in many aspects of study-service and can offer much useful experience to other countries.

The main tasks faced now are the improvement of those aspects of the individual universities' projects that are still weak, the increasing in size of existing projects and the starting of projects in the remaining institutions of higher education, and the obtaining of sufficient priority in financial support to make all this possible.

PROGRAMME OF WORKSHOP

Wednesday, 28 November

	Arrival.
	Participants will be met at Chiang Mai Airport.
	Registration at Rincome Hotel.
Evening	No activities are scheduled so that participants could read the papers in advance.

Thursday, 29 November

Official Opening at Salatham Hall, Chiang Mai University:

8.00 a.m. – 8.30 a.m.	Arrival of guests and workshop participants.
8.45 a.m.	Arrival of His Excellency, Dr. Toh Chin Chye, Minister for Science & Technology, Republic of Singapore; Vice-Chancellor, University of Singapore; and Chairman, Regional Institute of Higher Education and Development.
8.55 a.m.	Arrival of His Excellency, Prof. Aroon Sorathesn, Minister-in-Charge of State University Bureau of Thailand.
9.00 a.m.	Welcoming address by Dr. Amnuay Tapingkae, Director of the Regional Institute of Higher Education and Development.
9.10 a.m.	Address by His Excellency, Prof. Aroon Sorathesn, Minister-in-Charge of State University Bureau of Thailand, in declaring open the workshop.
9.25 a.m.	Greetings by Prof. Tawan Kangwanpong, Rector of Chiang Mai University.

9.30 a.m. – 10.30 a.m.	Reception at Chiang Mai University.
10.30 a.m.	His Excellency, Minister-in-Charge of State University Bureau of Thailand departs.
10.30 a.m. – 12.00 noon	Tour of the campus of Chiang Mai University by workshop participants.
2.00 p.m. – 5.00 p.m.	***Session I:*** "Problems of University Growth in Southeast Asia" Chairman: Dr. Amnuay Tapingkae (RIHED) Papers presented by: (1) Dr. Achjani Atmakusuma (Indonesia) (2) Dr. Khus Chiev (Khmer Republic) (3) Dr. Tenh Teso (Laos) (4) Prof. Do Ba Khe (Vietnam) Discussants: (1) Dr. Arshad Ayub (Malaysia) (2) Prof. Hsu Loke Soo (Singapore) (3) Mr. Mahmud Zaki (Indonesia) Discussion: All participants.
7.00 p.m. – 9.00 p.m.	Kantoke Banquet (Northern Thai Style Reception) hosted by Rector of Chiang Mai University, Prof. Tawan Kangwanpong, at Hotel Suriwongse. (Bus leaves Rincome Hotel at 6.45 p.m.)

Friday, 30 November

9.00 a.m. – 12.00 noon	***Session II:*** "Problems of University Growth in Southeast Asia" (Continued) Chairman: Prof. Do Ba Khe (Vietnam)

Papers presented by:

(1) Mr. Chief Justice Suffian (Malaysia)
(2) Dr. Louis Chen (Singapore)
(3) Dr. Wichit Srisa-an (Thailand)
(4) Dr. Augusto L. Tenmatay (Ford Foundation, Philippines)

Discussants:

(1) Prof. Soekisno Hadikoemoro (Indonesia)
(2) Dr. Sanga Sabhasri (Thailand)

Discussion: All participants.

2.00 p.m. – 5.00 p.m. ***Session III:*** "Problems of Expansion versus Consolidation of Higher Education in Southeast Asia"

Chairman: Prof. Lim Chong Yah (Singapore)

Paper presented by:

(1) Mr. Koesnadi Hardjasoemantri (Indonesia)

Discussants:

(1) Dr. Nguyen Van Hai (Vietnam)
(2) Mr. Ainuddin bin Abdul Wahid (Malaysia)
(3) Dr. Sippanondha Ketudat (National Development Commission, Thailand)

Discussion: All participants.

Evening Free.

Saturday, 1 December

9.00 a.m. – 12.00 noon Tour of Chiang Mai.
(Participants are requested to assemble at the lobby, Rincome Hotel, at 8.45 a.m. Bus leaves at 9.00 a.m.)

2.00 p.m. – 5.00 p.m. ***Session IV:*** "Mass versus Selective Higher Education in Southeast Asia"

Chairman: Dr. Prajudi Atmonsudirdjo (Indonesia)

Papers presented by:

(1) Prof. Lim Chong Yah (Singapore)
(2) Prof. Amara Raksasataya (Thailand)

Discussants:

(1) Dr. Pedro V. Flores (Philippines)
(2) Mr. F. A. Vasenwala (Singapore)
(3) Dr. Nguyen Dang Long (Vietnam)

Discussion: All participants.

7.00 p.m. – 9.00 p.m. Reception hosted by RIHED Director at Rincome Hotel Poolside.

Sunday, 2 December

9.00 a.m. – 12.00 noon ***Session V:*** "Summary and Recommendations"

Chairman: Prof. Yip Yat Hoong (Malaysia)

Summing up:

(1) Dr. Amnuay Tapingkae (RIHED)
(2) Dr. Charles F. Keyes (Rapporteur)
(3) Dr. Sunt Techakumpuch (University Development Commission, Thailand)
(4) Dr. Augusto L. Tenmatay (Ford Foundation, Philippines)

Discussion: All participants.

Afternoon Departure.

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CHIANG MAI UNIVERSITY

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REGIONAL INSTITUTE OF HIGHER EDUCATION AND DEVELOPMENT

RIHED is a regional and autonomous institution established for the purpose of stimulating and facilitating cooperation among the universities and the governments of the countries in Southeast Asia, and to enhance the contributions of higher education to the social and economic developments of the countries of the region and of the region as a whole. To achieve this primary objective, the activities of RIHED are focused principally on the following:

(i) To provide statistical, clearing-house and documentation services;
(ii) To conduct or arrange for the conduct and publication of studies of ways to extend the contributions of universities to development and of the functioning and organization of universities in this role;
(iii) To sponsor seminars and conferences;
(iv) To provide advisory and technical services;
(v) To cooperate with other agencies whose objects are related to the objects of the Institute; and
(vi) To encourage and facilitate inter-university and inter-country cooperation in the planning and conduct of mutually beneficial projects in higher education and development.

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